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ABSTRACT

This study of open education as practiced in a number of selected American elementary school classrooms is concerned with teacher, administrator and parent attitudes, curriculum, teacher and administrator roles, and learning approaches and outcomes. A sample consisting of ten elementary schools in six areas of the country was studied through direct classroom observation, individual interviews, small group meetings, and a teacher questionnaire. Individual observers spent one complete day with each of 33 open education classes (some vertically grouped) at various grade levels. Individual interviews were conducted with principals, advisors, superintendents, school-community coordinators, psychologists and social workers. At group meetings with teachers, staff development, curriculum and assessment were considered, while parent meetings (group or individual) dealt with questions of school-community relationships and parent attitudes. The questionnaire (which presented 77 statements on open education to be ranked on a 5-point scale) was completed by 86 teachers and teaching aides. Responses on this questionnaire were compared with an additional set of questionnaires completed by 38 teachers in schools in England. Appendices include descriptive data on the individual schools and a practicum section with sample classroom timetables and sketches of classroom layouts. (BF)

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OPEN EDUCATION

A STUDY

OF SELECTED AMERICAN ELEMENTARY SCHOOLS

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Leonard Sealey

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THE STUDY

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That everything proceeded smoothly is largely a function of the degree of freedom accorded me by my sponsors. In addition, the encouragement and help provided by William L. Bradley, the President of the Hazen Foundation, ensured that major administrative difficulties never arose.

The work could not have been undertaken without the whole-hearted cooperation of many people, some of whom I am now able to count as friends. Administrators provided easy access to the schools, but it is the teachers and advisors to whom I owe the greatest debt of gratitude. By virtue of their interest and trust, I was able to come close to them, and to the children.

I would also like to acknowledge the critical input of my wife, Nancy, who acted as my research assistant. Her experience as an inner-city teacher, her involvement with parents and others to establish one of America's first community schools, and her work as an open education adviser made her contribution invaluable.

Finally, I must thank James Koerner of the Sloan Foundation, for his insights regarding the form in which this report is presented and for editing the manuscript.

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BACKGROUND FOR THE STUDY

Although the term "open education" was coined here in the United States, it is widely acknowledged that the antecedents of this approach to the education of children are deeply rooted in the evolutionary developments which took place in certain British infant, junior and primary schools in the 1960's. These developments continue in Britain.

As the adviser for junior schools in Leicestershire, England at the time, I was deeply involved in helping schools change. It is now more than twelve years since educators from the United States, such as William Hull, and David and Frances Hawkins, first visited Leicestershire to observe the developments first hand. I have since been engaged in a variety of undertakings on both sides of the Atlantic, and open education has now become one of the alternatives available in the United States.

Starting with the series of articles by Joseph Featherstone in *The New Republic* in 1967, there has been a constant stream of serious writing about open education, much of it very influential. For example, Charles Silberman's book, *Crisis in the Classroom* (1970), argues a strong case for open education as a likely solution to many of the ills of American elementary schools. This book and others stimulated a great many schools to experiment with the open approach.

It seems that the open education movement has now reached a particularly sensitive stage of its development in the United States. Since 1967 it has enjoyed an extended period of financial support from private foundations whose funds have been used to introduce the open approach into schools, to train advisers, to help establish teacher centers, and to assist with staff development in general. In addition, certain federally funded projects, particularly Follow Through, have made a significant contribution to the development of open education, and many colleges and universities have provided leadership and support in the field. There is little doubt that some of these projects have demonstrated the potential of open educa-

tion at the elementary school stage, but such potential has not yet been realized fully.

One effect of the rapid growth of interest and experimentation has been to invest the term "open education" with a wide variety of meanings. Although many schools across the nation assert that they have adopted the approach, or that they have some open classrooms, the notion of open education itself is still vague, the practice varied, and the outcomes largely unspecified. The 1975 Gallup *Survey of the Public's Attitudes Toward the Public Schools* revealed that only 27 percent of the individuals interviewed said that they knew what is meant by open schools, and only 13 percent approved of them.

It is hardly surprising that many people either have no opinion about open education, or disapprove of it. Many beliefs about it are not based upon fact, and many expectations are either too modest or unrealistic. Open education is often associated, incorrectly, with the image of schools without internal walls and children without direction. The "back to the basics" movement in the United States opposes open education because it is assumed that insufficient time and effort are devoted to helping children become competent in the basic skills. To a limited extent, a similar concern exists in Britain, where publications such as the occasional issues of a so-called *Black Paper* imply that the "progressives" are content with lower standards.

The original concept of an approach to education which could be described as "open," and which I and others in Britain held in our minds, was not formulated by reference to theoretical positions elaborated in the literature. Rather it was a response to the actual behavior of children in the schools. It was clear, for example, that individuals solved problems of all kinds in ways which teachers did not always anticipate. Children frequently appeared to think differently from their teachers. Children were highly motivated, and regarded themselves well, when allowed to make significant choices concerning
4 many aspects of their learning. Sometimes, but not always, the

choice could involve the kind of activity to pursue. Usually, children seemed able to decide the level of difficulty to which they would aspire once they had grasped the basic ideas. Nearly always, they were capable of making reasonable choices about the time they would spend on each of the activities specified for the day. Children seemed to many of us able to accept much more responsibility than we had once thought, and, in doing so, to become more responsible. It was apparent also that personal interests and out-of-school experiences could become the bases for powerful learning experiences in the classroom.

Above all, it seemed that the didactic stance of the teacher was wasteful: that teachers were better employed relating personally to individuals or small groups in an attempt to understand children's immediate needs and respond to them positively. It was also clear that children could learn as much from each other as from their teacher, indicating that this effect could be elaborated if children of more than one grade level and of many different abilities worked together, thus enabling those younger or less advanced to imitate and aspire to the behavior and achievements of others.

Such observations about the actual behavior of children suggested ways in which schools should change in terms of curriculum, management, learning materials, supplies, and facilities. It should be noted that there was never a great, overt concern with the affective domain. The British approach is not directly aimed at making schools more humane. It is presumed that they will be so if they are able to make concerned responses to children as they are. The expectation of the open approach is that it will provide a better way to help individuals achieve their potential and have a sense of accomplishment. There is little concern for all children of the same age to achieve a common standard. It is understood that there will be considerable differentiation in regard to many aspects of children's development.

Open schools in Britain today vary greatly in appearance, in 5

organization, and in regard to the nature of the learning activities. There is no notion of a static model to which schools should aspire, but some common characteristics can be identified.

Truly open schools have many structures and support systems to allow for flexibility of response. There is no rigid timetable, but a broad framework of freedoms and requirements within which individuals can work effectively and gain some sense of being in command. Planning ahead and reflection upon things accomplished take place regularly. Teachers usually plan for the day with the children and establish times for reporting back and sharing ideas. The teachers and the principal also plan together in formal and informal meetings. The principal exercises educational leadership within each school, and often works with children.

The whole school is the environment for learning, not the classroom, and relationships at every level are close. There is a good sense of community, and enthusiasm is evident. Most important, open schools also respond to the interest and needs of teachers so that they have the opportunity to contribute fully, and feel valued. Despite the variety and individuality of children's activities at any moment, there is much recording of their progress, although little use is made of standardized tests. Just as an Olympic judge of ice dancing has no objective standards, yet is confident in his own subjective assessments, so it is with many British teachers.

Open schools in Britain, increasingly, relate more closely to the local environment and to the community. There is a growing realization that children must get out and about to investigate and observe in a serious manner, so that learning is at first hand, both in and out of school. After decades of comparative isolation, parents and others are now welcome in open schools, and often contribute to the life of the classroom.

Despite the spate of writing about open education in the United States, there is comparatively little in print which de-

scribes how classes function. A lack of such knowledge and a too-ready acceptance to sweep aside one educational approach after another before maturity is reached appear to threaten open education here; it may be allowed to wither without our knowing what is happening in regard to its practice.

This study of open education was not intended to stand in defense of the approach, but rather to redress the imbalance in the writings about it. Its chief purposes are to describe how open education finds expression in a small number of classrooms throughout the country, to know something of the thought behind the practice, to consider some of the notable virtues and problems, and to draw out some implications for further development.

THE SAMPLES

American Schools

The selection of schools for this study was a critical issue. It was essential that the sample be chosen with the objective of making the investigation significant to a wide audience, but I thought that a superficial survey of a large number of schools would be less useful than the more careful study of a few.

The most difficult problem concerned the definition of "open." How could I decide whether a school was open or not? I resolved the question finally by accepting that the judgement had to be made by the school itself, the school district, and the community. If a school declared that it practiced open education, the superintendent confirmed this, and the whole was publicly acknowledged, then I accepted that the school represented the approach.

Certain other criteria were established before particular schools were sought. It seemed necessary that the sample as a whole should have the following characteristics:

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1. Be representative of minority groups
2. Be representative of urban, suburban, and rural communities
3. Be representative of different geographical regions of the United States
4. Be representative of elementary schools of different sizes and different age ranges
5. Be representative of both the public and private sectors
6. Be associated with the various kinds of supporting projects and agencies which have fostered the development of open education in the United States

It was also considered that individual schools should:

1. Have at least two years' experience of open education, and judge the approach to be successful
2. Be typical of other schools of their kind, and not have unusual financial support, an exceptional staffing ratio, or other unique features
3. Want to participate in the study in a serious manner

I sought advice from a number of people regarding schools which might be included, and chose six sites which, by virtue of their open approach, were highly "visible." More than one school was included at three of the sites; ten schools altogether made up the sample. The sites were:

Site A (3 schools)—District Six, Philadelphia, Pennsylvania
Site B (2 schools)—Berkeley Unified School District, California
Site C (1 school)— Hamden-New Haven Cooperative Education Center, Connecticut
Site D (1 school) —Ferndale, Washington
Site E (2 schools)—Waxahachie Independent School District, Texas
Site F (1 school) —Convent of the Sacred Heart, Greenwich, Connecticut

Details of the sites are given in the appendix, but their chief characteristics are summarized in the table which follows.

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Characteristic	Site					
	A	B	C	D	E	F
Urban/suburban/rural	U	U	U/S	R	R	S
Geographic location	E	W	E	NW	S	E
Public/private	P	P	P	P	P	Pri.
Large school(s) included	Yes	Yes	No	Yes	Yes	No
Small school(s) included	No	Yes	Yes	No	No	Yes
American Indians in school(s)	No	No	No	Yes	No	No
Asians in school(s)	No	Yes	Yes	No	No	No
Blacks in school(s)	Yes	Yes	Yes	No	Yes	Yes
Chicanos in school(s)	No	Yes	No	Yes	Yes	No
Hispanics in school(s)	No	No	Yes	No	No	No
Supported by project team	Yes	Yes	Yes	Yes	No	No
Supported by school district	Yes	Yes	Yes	Yes	Yes	No
Supported by advisers	Yes	No	Yes	Yes	Yes	No
Teacher's center available	Yes	No	Yes	No	Yes	Yes
Consultants involved	No	Yes	Yes	Yes	Yes	No
Years of open education experience	7	2/4	8	5	4	7
Grade levels	k-5	pre-k -3	k-3	k-3	k-5	k-6

British Schools

Although it was never intended that the study should attempt a comparison between American and British approaches to open education, I considered it necessary to have up-to-date information concerning recent developments in Leicestershire, and in at least one innovative inner-city school in England. I chose Leicestershire because it was the model upon which many open approaches in the United States are said to be based; and because many teachers, principals, and advisers from that county have spoken at or conducted workshops here.

We visited three schools in England. They were not the subject of serious study, and I do not discuss them in this report.

THE METHODS

Given that the sites had been selected in relation to valid criteria, I needed to establish a method which was compatible with the nature of the open approach being studied. The primary decision concerned treating the sample of schools as a whole. I decided that schools, classes, or individuals would not be compared with each other, and that anonymity would be preserved throughout.

The next step was to prepare an outline to indicate the scope of the study in the form of clusters of questions around pertinent themes. The information necessary to pose answers to the questions could not be obtained solely through observation. Much of it was locked up inside people's heads. Teachers, administrators, parents, and others would need to feel secure enough to take the risk of revealing what they really thought and how they normally behaved. Anonymity would serve to reduce the anxiety level, but it was not sufficient in itself. Participants needed to understand and agree with the reasons for the study; they needed to contribute to detailed planning, and be assured that the investigators had the qualifiying

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background, the integrity, and the other personal qualities necessary for the undertaking. I decided that the only way to satisfy these demands was to pay careful attention to the preparatory stages of the project, to be completely open about every aspect, and to meet all the potential participants in person before the work began.

The first approach to each site was a letter to or a telephone conversation with the superintendent of schools or other person in charge, outlining the project, expressing the hope that particular schools might wish to become involved, and seeking an opportunity to provide more information in person. This letter was then followed by the first site visit during which the project was "cleared" and permission given to approach the schools. In some cases, the schools were visited on the same occasion. In others, the first school visit was made at a later date.

The chief purpose of the first school visit was to meet the staff, share with them our plans for the study, and seek their voluntary participation. We made it clear that we understood that some teachers would not have the time or the interest to participate fully. Wherever possible, meetings were held with groups of teachers to respond to their questions about the project and to solicit ideas about ways to proceed. We had in mind that information about open education should be collected in four main ways:

1. By direct observation of classes and schools in action
2. By interviewing critical people individually
3. By meeting with small groups of parents and teachers about areas of special interest
4. By inviting all teachers to complete a questionnaire about their views of open education, both in regard to thought and classroom practice

These procedures were generally acceptable to those concerned, and it was agreed that the equivalent of one school week would be spent at each site, involving one visit, or two.

Classroom Observations

We decided that only a sample of the classes at any one site could be observed. The sample included at least one class at each grade level where open education was operating, and all the teachers participated voluntarily.

Observations were conducted by my wife and myself, working separately. In total, we spent one complete day in each classroom from opening to dismissal. We each spent half the day with a class, recording subjective observations in our own way. Subsequently, we shared experiences and impressions to generate a summary analysis in a form which was used throughout. In addition, I made several short tape recordings of conversations with children as they worked, and took a number of photographs as unobtrusively as possible. We invariably explained to the teacher in advance how we wished to proceed, and obtained permission to do so. At the conclusion of each period, we outlined our observations for the teacher, and invited comments on anything considered to be atypical.

Observation took place in 33 classes:

Single level classes:		Vertically-grouped classes:	
Pre-school and nursery	— 1	K—1	— 1
Kindgergarten	— 6	K—3	— 1
Grade 1	— 7	1—2	— 1
Grade 2	— 4	1—3	— 2
Grade 3	— 3	2—3	— 4
Grade 4	— 0	2—4	— 1
Grade 5	— 1	5—6	— 1

Individual Interviews

We prepared schedules for the interviews with principals and advisers, based upon the study outline. At the time each principal was interviewed, we collected basic information about the school. We also obtained information from advisers about their training, experience, and the circumstances of their present appointments.

At two sites we held discussions with the superintendents. In many places we were also able to interview project representatives, school-community coordinators, psychologists, and social workers.

Group meetings with teachers and parents

At each site we held two after-school group meetings with those teachers who wished to attend. One meeting concerned staff development, and the other the curriculum and the assessment of its effectiveness.

The staff development meeting related to the following questions:

1. What are the characteristics of effective staff development activities?
2. What suggestions can you make for experiences which would further your own professional and personal growth within the context of staff development?

The questions discussed at the curriculum and assessment meetings were:

1. What are the critical qualities of open education which sharply differentiate it from traditional approaches?
2. How do you assess the effectiveness of your work?

At each school, we held a group meeting, or a series of individual meetings, with parents. The following questions were considered:

1. What is the relationship between the school and the community, and how does it find expression?
2. What are you most pleased about in regard to the education of your child in an open classroom?
3. What are you most worried about?

The Questionnaire

In order to determine the participant's view of the characteristics of open education, and to have their personal assessments of the degree to which such characteristics applied to their own classrooms, I prepared a questionnaire which listed seventy-seven statements about open education.

Of the seventy-seven statements, twenty were adapted from the work of Judith T. Evans. While involved in the Education Development Center's Pilot Communities Program, Dr. Evans devised a classroom observation rating scale and a corresponding teacher questionnaire based upon an analysis of the literature about open education, and conceptually verified by open education advocates, for use in her 1971 study of the characteristics of open education. All other statements were formulated by myself.

The questionnaire was offered to each teacher and teaching aide in every school, but it was stressed that only those who considered that they were running an open classroom, and wished to complete the document, should do so. For comparative purposes, a corresponding sample of Leicestershire teachers also completed the questionnaire. All questionnaires were completed anonymously. The questionnaire, and its analysis, are included in the appendix.

WHY OPEN EDUCATION IN THESE SCHOOLS?

The development of open education in the schools studied stems from one of two sources. Either it was brought in from the outside through participation in a project, or initiated by a central figure within.

In the first case, the project was Follow Through, which is supported by both federal and state funds. The three project sponsors involved were the Education Development Center, Bank Street College, and the Center for Teaching and Learning of the University of North Dakota. In the second case, the central figure was either the principal or the superintendent. At three sites, the initial stimulus came from Follow Through, at two sites from the principals, and at one from the superintendent.

Everywhere, there was concern to find an alternative which would better meet the needs of children. The personal experiences of the innovators, supported by writings about the potential of the British approach emanating from both sides of the Atlantic, suggested the nature of the new direction, but there was no concern to replicate British practice; nor was there a concept of open education as a static model which had only to be implemented.

Although many teachers and principals still have only a vague notion of how their own approach corresponds with that in Britain, some had exposure to the ideas and practices there. At one site, the local advisers, a number of teachers, aides, parents, and the district superintendent had visited schools in Leicestershire in 1969 for a three-week period. At another, the adviser, at her own expense, had spent more than six weeks in schools in London and Oxfordshire. At a third, one of the principals, also at her own expense, had spent several weeks in primary schools in England. At a fourth site, British teachers had been recruited to the teaching staff from time to time, where they also functioned in an advisory capacity. One is still

a staff member. At a fifth site, a British teacher was on the staff when the open approach was first introduced. Most of the sites have used British consultants, albeit briefly. The EDC Follow Through staff included two English teachers and one former principal as advisers, and there was exposure to other British educators at various workshops.

Although the initial impetus was generated elsewhere, there is no doubt that open education in the schools included in the study is sustained primarily by the teachers. As one principal stated emphatically, "It is their interest and commitment above all else."

The teachers stated that they approve of the approach for a variety of reasons. It appears that they enjoy the mutual support and regard engendered among the staff, and no longer feel isolated. They respond positively to increased professional freedoms, and find satisfaction, and sometimes excitement, in the results observed in the classroom. These aspects are enhanced further by increased knowledge of and respect for the teachers' work by many parents.

Parental support is also a highly significant factor in sustaining the approach. It is not only practical assistance which is forthcoming, but support for the idea. Parents give open education "visibility" in the community and largely dictate whether the view is favorable or not. The degree of parental support varied with the sites, but it was evident everywhere.

Nor can open education be sustained without support from administrators and school boards. Sanction is the minimum requirement, but success in implementation appears to be related directly to the degree of support above that level. At certain sites, the school board's view seems to be influenced by publicity. A good press is critical to the survival of open education.

Further down the list of sustaining elements is the contribution
16 of advisers, consultants, project personnel, and teacher's cen-

ters. However, where advisers and resource teachers are seen as an integral part of the staff of a school, they become more significant in the sustaining process.

When questioned about the rationale for an open approach to education in elementary schools, the teachers found it difficult to be explicit, although their responses suggest strongly that it is seen as a more "natural" approach, which accepts the child as he is, encourages individuality, and provides a humanistic context for formal education. The presumption is that such qualities are required prerequisites for the realization of a child's potential in both the cognitive and affective domains. Thus, the contention would seem to be that the rationale is largely developmental, although a close association with the tenets of developmental psychology was not expressed. There was some leaning toward Piagetian views, but these were not in the forefront of thinking, nor were they generally known in any depth. In none of the schools was any aspect of the rationale suggested as being either expedient or political. Societal reasons, however, were mentioned on occasion. For example, it was suggested that open education contributed to the development of the child's awareness of how he related to others, and provided many opportunities for children both to lead and follow in a variety of groups.

The responses made at the group meetings to the question, "What are the critical qualities of open education which sharply differentiate it from traditional approaches?" indicated more specific reasons why teachers are concerned to support the approach. The chief characteristics suggested were:

1. The focus is on children learning rather than teachers teaching
2. Children's learning is open-ended
3. Learning is individualized
4. Children demonstrate a desire to learn
5. "Contagious learning" occurs (children stimulate each other's learning)
6. Many different contributions by children in relation to learning are expected and welcomed

7. New kinds of learning materials are used, and conventional materials used in new ways
8. Differentiation is encouraged in the ways in which children engage in learning tasks
9. Children have freedom of choice, and freedom of movement
10. The learning environment extends beyond the classroom
11. Many different activities go on in the classroom at the same time
12. Teachers have time to talk to children and can relate to them honestly
13. Both teachers and children can "be themselves"
14. Children have a real say about their classroom and what happens there
15. Teachers have the freedom to determine the curriculum in response to the needs and aspirations of children and their parents
16. Teachers' individual ways of working are validated
17. Parental involvement is much greater, and there is improved communication between home and school
18. The child is responsible for evaluating what he does
19. The locus of control is within the child, rather than external to him
20. Children exhibit greater ability to cope with change
21. The approach helps a child to deal appropriately with options
22. Open education leads to independence of thought and respect for knowledge

The teachers who responded to the questionnaire also presented a view of the essential characteristics of open education. This accumulation of statements is given in the appendix.

We presumed that the schools selected for study were largely open throughout. The principals of six of the ten stated that this was so, but some teachers disagreed, and it was difficult to find classes at the fourth grade and above which their teachers described as being open. In the remaining four schools, open

education classes were restricted to enable parents and teachers to exercise options.

Of the ten schools studied, only five exteneded beyond the third grade. This is indicative of the fact that open education is more prevalent generally at the primary stage.

WHAT DO THE CHILDREN STUDY?

The presumption which is often made about the content of the open classroom curriculum, namely, that it is basically different from that of the traditional school, was not upheld by our study. Children were concerned with the same kinds of learning and the same fields of knowledge. There was no well-considered, formal re-definition of the curriculum, although, at one site, curriculum elements were being reviewed by study groups composed mainly of teachers.

The notion that children in open classes are normally free to do whatever they wish is a fallacy. Each class observed had a daily program which the children followed, although there was considerable variation in the degree of specificity.

The questionnaire revealed that it was only the teachers in kindergarten and in the first and second grades who considered it essential for the school day to be divided into large blocks of time within which, with the teacher's help, individuals determined their own routines; and only in kindergarten did those teachers consider that practice matched expectations. Teachers in the primary grades thought it essential that children normally should be free to choose among alternatives, but again, only the kindergarten teachers felt that they had been able to elevate practice to a corresponding level.

Children's work at the kindergarten stage was either self-initiated in relation to materials and activities made available by

the teacher, or directed by oral instruction based upon the teacher's diagnosis of the point each individual had reached. About half the classes observed followed the same general routine every day, while the others had specified variations throughout the week. Two thirds of the classes had a timetable which was undifferentiated in that it made no reference to the traditional subjects and referred only to kinds of activity. In all classes there was some individual and some group work. Groups were either self-selected on the basis of common interests or for social reasons, or were designated by the teacher in relation to particular elements of learning or desired outcomes. The teacher-designated groups were often of homogeneous ability or attainment. The only times that children came together as a whole class during a typical day were for meetings, for music, for dance, for a story, or for games and physical education.

It is widely thought that the larger part of the children's experiences in open classes in kindergarten consists of inquiry, of explicitly trying to find out something through a variety of interactions with materials of many kinds. In less than a quarter of the classes observed was inquiry sufficiently common to be considered the normal mode, and in one third it was severely limited. Whenever inquiry took place, it usually involved things, rather than symbols. In general, it was well-supported by teachers, although the resources were never better than adequate.

Children in kindergarten classes were nearly always busy, and teachers moved in alongside them with ease and to good purpose. There was no difficulty in assimilating other adults into such classes, and we saw many parents making very positive contributions, ranging from acting as "experts" in relation to some activity such as pottery, to reading quietly to a small group of children in a comfortable corner.

Beginning at grade one, the concern that children should learn to read makes increasing demands on children's time. Reading
20 and language arts activities find a separate place in the daily

program. Contrary to the popular view, almost all the open classes we observed spent at least as much time as traditional ones in such activity. The approach, too, was similar almost everywhere. Children were in ability groups, used conventional texts, workbooks and ditto sheets, and this was often followed up by homework.

Elementary mathematics as a separate activity was not given as much stress as reading and associated language arts. It was seldom given a specified period in the daily program of the classes we observed before grade two, although many children engaged in mathematical activity at various times during the day. There was some teaching in groups, but much of the mathematical activity was individual. However, there was little change in the approach. Most children used texts. It seemed that only where teachers had developed a personal interest did the approach involve structural and other concrete materials, and depend upon the solution of interesting and relevant problems.

Most of the children's work was assigned orally, often at the meeting which began each day in most classes. When assigned work had been completed, and it was not time for formal group work, children were normally free to choose individual activities. The choice was both stimulated and limited by the way in which the room was arranged, and by the materials available.

In addition to group work in relation to conventional subject matter, several of the first grade classes we observed were involved in extended studies which sometimes led to group work of a different kind. One class, for example, was studying skeletons, and groups of children were working on various aspects of this topic. In another class, the study concerned whales. Such work had little formality, and groups often formed spontaneously when interest was aroused by individuals.

In grade two, the greatest change was the widespread increase in the use of workbooks for reading, language arts, and mathematics. These workbooks, and the associated texts, were

exactly those of the traditional classrooms. We saw work assigned in writing, rather than orally. Assignments were often written by the teacher on the chalkboard for large groups, or the whole class or, less commonly, written as individual assignment cards. In several classes, children were required to record, in very simple forms, how they spent their time each day.

In the classrooms observed, the mounting concern for more formal studies showed itself in a detailed timetable where various subjects, in addition to reading and language arts, were specified. Time for mathematics and social studies was usually shown. As a result, children in many of the second grade classes spent most of the day at "desk work." Activities such as construction, investigation and a variety of expressive art forms were limited to "choice time." Various sign-up or other management systems were employed to ensure that activities were not over-subscribed during this period.

Because the claims of reading, language arts, and, to a lesser extent, mathematics have pushed children's choices of a wide variety of activities into limited and closely prescribed times at grade two, such choices were often seen by both teachers and children as being completely divorced and essentially different from "work." There was little or no integration.

Homework was assigned in several of the second grade classes. The following is an example:

READING: Put a word in the blank.
We _____ going to the store. (was, were)
He _____ to visit his aunt. (like, likes)
My friend _____ at the A and P. (works, work)
_____ she like hot dogs? (Do, Does)

ARITHMETIC

3	4	2	1	6	2	1
x2	x3	x5	x9	x0	x4	x8
___	___	___	___	___	___	___

1	5	10	7	2	8	9
x0	x3	x2	x2	x7	x1	x1

In the grade three classes the approach was similar to that in grade two, except that it was further developed. Work was assigned orally or in writing, and many children had folders in which the outcomes were accumulated. Most children also had workbooks for language arts and mathematics, and a basal reader. Assigned work had to be completed before children could choose what to do, and the range of options was limited. In several classes individual prescriptions were written on duplicated forms which the children then used for record purposes. Choices included activities such as the use of mathematical and scientific apparatus. The curriculum was broadened by such subjects as science, handwriting, and creative writing, which were timetabled. Children sometimes went to teachers other than their own for activities such as music, science, and physical education. In general, the mornings were more highly structured than the afternoons. Homework was assigned in some classes but not in all.

There was little variation of the approach at the grade four level, except that topic studies usually were undertaken by a class as a whole. These were often related to field trips or visits. Group and individual work, which extended over a considerable period, often ensued. There was also much writing to report findings and happenings, or to express ideas. Despite a formal timetable, different activities often took place at the same time.

At the fifth grade, the timetable was largely traditional, but almost all the work was individual, or in small groups. Inquiry was common. It was both symbolic and experiential, but investigations were largely teacher-designated. Writing was a common mode of expression, but standards were lower than might have been achieved if children had been encouraged to write more in the earlier grades.

We observed that classes which contained more than one grade level were more flexible. The children were treated more

as individuals, and were helped to achieve at the highest level they could attain, irrespective of their age. The right to choose was preserved for a longer period, and there were many more diverse options. For example, in a class containing children at second, third and fourth grade levels, they had many opportunities to make significant choices and work in their own ways within prescribed boundaries. During the afternoons, the children were able to follow their own interests, or work on assignments which had emanated from field trips, and the teacher ensured that such activity was closely related to the formal skills of reading and writing. Mathematical activity was varied, and even the older children were able to use concrete structural materials, should that seem to be necessary. In all the vertically grouped classes, teachers seemed much more willing to allow children to set the levels to which they aspired. Indeed, the questionnaire reveals that this is the only group of teachers who thought it to be essential.

While it was evident that almost everything studied, and almost every activity in which the children in the open classes engaged, could be found in traditional schools, the one general exception was a greater stress on the expressive arts. This is not to suggest that all children were greatly extended in this regard, but more materials and opportunities for expression were available more widely.

At certain sites, additions and modifications to the content of the curriculum had been made in response to particular interests of teachers and the community. For example, cooking had been introduced at several sites. At another, the social studies program had been based almost entirely upon social issues with which both staff and community identified. Everywhere, children made many more organized visits to places of significance outside the school, and these affected in-school studies subsequently. As one principal stated, "The nature of open education as I see it has been to make use of any and all resources from fine arts in museums to insects in a rotting log on the school property . . . . Children have visited post offices, farms, beaches, colleges, a quarry, libraries,

museums, the zoo, botanical gardens, TV stations, grocery stores, historical restorations, and cemeteries."

SOME PROBLEMS RELATING TO A BROADER CURRICULUM

Although open education teachers are concerned to widen the experiential base of children, to accept and build upon their interests and ideas, and find time for learning experiences which speak to the broad spectrum of children's developmental needs, it would seem that all this is very difficult to achieve within the present constraints.

The open schools in the study were by no means free of the many pressures upon teachers to produce good results as measured by conventional achievement tests. At only one of the six sites were such measures used less. At three sites, the use was unaltered, and, at the remaining two sites, the use had increased due to the experimental nature of the approach. The principal of one school explained that there had been a swing away from the use of standardized tests in the early stages of the open approach, but then a swing back again to moderate use. In this particular school a program was being devised for continuous assessment to replace, or at least supplement, standardized test data. At the time of the study the most promising elements of the program had proved to be:

a. Anecdotal records which tell when and how achievement takes place, and which methods best assist skill development
b. Teacher-prepared schedules of children's behaviors which show that learning has occurred
c. The collective, focused concern of the school staff for individual children through the use of the "staffing" procedure devised by Patricia Carini of the Prospect School, Bennington, Vermont, one of the leading

proponents of cumulative record-keeping about children's development

At another school developmental check lists had been devised, and collections of children's work assembled over time.

The inhibiting effects of the continued use of conventional texts, and the application of standardized tests to assess progress, were clearly expressed in the following comment from an adviser at one of the sites:

> *My experience of our site is that there has been a process of compromise over these last several years; a recognition that standardized tests and texts are what give the system a sense of security; that intellectual openness is a threat. So teachers' priorities in preparation for day-to-day classroom programs have been weighted in the direction of trying to make the traditional basic skills more palatable and suitable to individual children. In the back of their minds, they would like to do a lot of other things, but there is a real conflict to be resolved between their having to ask for various closures around basic skills, and wishing for more openness and free enquiry.*

A teacher was even more specific in relation to the mathematics curriculum:

> *There is a very specific math curriculum that must be taught. The skills and understandings are tested by standardized tests and levels tests. The teacher must cover this curriculum whether or not it is what she would choose to teach, since her freedom to work in an open classroom depends on how well her children's scores compare with those from traditional classrooms. The best thing that can be done under these conditions is to individualize learning and try to be sure that there is an understanding of concepts involved. With what time and energy left over, indi-*

vidual teachers can and do try to include other mathematical learning such as logical thinking, etc. With the emphasis on the traditional math curriculum, however, not much time has been spent in trying to discover a more appropriate "curriculum" by administrators, advisers, and teachers and then selling it to school districts as an alternate and more suitable way of helping children to think mathematically.

In addition to pressures from within the school system, there were also pressures from parents, despite the fact that relationships between the schools and their communities were uniformly good. There would seem to be few fundamental changes in parents' aspirations for their children. They want them to achieve well in conventional terms so that they can compete successfully with others at later stages of their education, and in adult life. However, the principals of some schools thought that parents' horizons had been widened, and their expectations for their children raised as their understanding of open education deepened. In some instances changes were taking place because parents were realizing that "success" did not necessarily mean getting into college. They were becoming much more interested in vocational education, and more concerned that education should be in accord with the individual. On the other hand, one principal pointed out that many parents were beginning to expect too much.

There were mixed opinions about whether or not parents saw the open approach to education as contributing towards the aspirations for their children. Some principals considered that the majority of parents did think in this way and placed a great deal of trust in the schools. Others were not so certain. As one principal stated:

I think at this moment many parents are very confused about the relationship between quality education and their children's future. Many do not see, for example, that developing a child's sense of judge-

ment depends on having the opportunity to make his own judgements in limited areas, try out his own decisions, and even make mistakes! . . . Our parents for the most part see memory and mechanical skillwork as the chief components of achievement in education. So we still have a lot to do to bring most parents along to our ideals of depth of knowledge rather than quantity of facts learned . . . . Those who share our aspirations for education and don't impose unsuitable aspirations on their children have fewer disappointments in our philosophy of education.

Yet the parents of some of the younger children in many of the schools were content to have short-term aspirations for their children. One parent who was visiting a kindergarten class stated emphatically about her little girl, "She is self-confident and likes school, and everything else will come later!"

Another principal suggested that public demands for education to "go back to basics," the community demands for the right to set goals for education, and the subsequent design of a goal-based curriculum at district levels, would favor behavioral approaches to the detriment of the open approach. There were signs of this train of events being set in motion at two of the sites.

CHANGES IN CURRICULUM GOALS

Despite the very limited changes in curriculum content, the continued use of traditional texts and procedures, and pressures for children to achieve in conventional tests, there has been a shift in regard to the goals of the open classes. In general, we found that goals were more closely related to behaviors and attitudes than to levels of achievement expressed in numerical terms. This is not to suggest that there was
28 reduced concern for competence in the basic skills. Indeed,

such concern was greater than ever before in many of the schools, but it was not seen as all-important to the exclusion of everything else. As one adviser put it, "We have a much greater concern that children should develop competence in handling their world, but this also depends upon emotional stability and maturity in general."

In the superintendent's office at one of the sites, a number of illustrated quotations line the walls. A quotation from Thoreau is one of the superintendent's favorites. It reads, "It is not enough to be busy . . . the question is: what are we busy about?"

The schools in the study were busy about a number of different things, but these converge to a remarkable degree. The important outcomes may be grouped into four categories:

1. The child as an active participant in his own learning
2. The child as a valued individual
3. The child as a maturing person with social responsibilities
4. The competent child

For a child to be an active participant in his own learning, he must be self-starting, self-directive, and be spurred on by intrinsic rather than extrinsic motivation. The schools which we studied wanted the child to be diligent and to stay with a task, but encouraged creativity as well. As one school brochure about its program stated, "The goal . . . is to provide opportunities for a child to invent, learn, and discover."

When a child is valued as an individual, he is accepted for what he is and where he is. The schools in our study made it clear that interests must be taken seriously, and help and encouragement be given to children to extend them as far as possible. Abilities must be developed as fully as possible, irrespective of the starting point. It was also recognized that acceptance of individuality presupposes the acceptance of each child's particular way of learning.

Personal maturity and the acceptance of social responsibility cannot be fully achieved at the elementary school level. But the schools in the study exhibited concern for the total child in that his intellectual, emotional and social growth were all nurtured. Social responsibility grew out of mutual cooperation and respect. The desired outcomes were expressed at one school as follows:

> *To increase children's self-confidence and pride in their own cultural, sex, and ethnic groups and to increase awareness and understanding of other groups.*

All the schools considered competence, at the elementary level, to be closely related to the attainment of basic skills. Their concern for the ability to read transcended that for the ability to express ideas in writing, or the ability to understand and use mathematical ideas.

In every school, all the four categories of outcomes were seen as important, but certain of them were given greater emphasis by individual teachers. In come cases, this emphasis was extreme, and other outcomes suffered as a result.

LIVING AND LEARNING IN THE OPEN CLASSROOM

It will be clear from the consideration of the curriculum that open education may be viewed as a new approach, conducted in a radically changed setting, to much of the "old" learning. The extensive changes in the classroom "climate" are a function of the modifications of the physical environment and changes in teachers' sentiments and behaviors.

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Almost without exception, the classrooms we observed had nothing of the traditional appearance. Children's furniture was arranged informally; there was no single direction towards which every child was supposed to look; areas of the room were specially equipped in relation to particular uses; and the whole had a general appearance of a learning workshop in which children were expected to be active. Indeed, when a class was at work, it was often difficult to find the teacher at first glance. Children were normally free to move around without asking an adult's permission, and the materials they needed for their work were readily available.

Children were able to concentrate on an individual activity, seemingly undisturbed by others who might be working nearby on entirely different tasks. Yet there were frequent and purposeful interactions among the children and adults. Many children preferred to work with a partner, or in a small group, and there was a great deal of talking. An outstanding feature of the classrooms was the high quality of the verbal and non-verbal communication among children and adults. Very little of the talking overheard in the classrooms observed was social, the greater part being the sharing of information and ideas. Children also took time to teach each other. The majority of the classes were characterized by examples of cooperation, and children did not denigrate each other's accomplishments, although they were well aware of the differing levels of their peers. They were generally supportive of and quite gentle toward each other. The abrasiveness of many traditional classes did not exist, and there were few signs of children ignoring others of differing ethnic or social backgrounds.

Although many of the basic learning materials of the open classrooms may be found in conventional schools, there was greater variety overall. Many open education classes had practical apparatus for mathematical and scientific activity, and technical equipment such as audio-visual aids for listening and reading. Natural materials, such as clay, and living things, were also common. Some kindergarten classes had a wide variety of small animals. In general, there were many more reference and

library type reading books in the classrooms, particularly classrooms for the younger children. Children took some responsibility for maintaining the environment by actions such as bringing things of interest to school, by cleaning-up, and by feeding and caring for the animals.

Despite the varied appearance of the classrooms, diversity was only moderately rich beyond kindergarten, and it often lacked depth and quality. Surprisingly, there were few notices and displays designed to stimulate further activity. Most of the displays formed the end points of work, such as the outcomes of a topic study, or were amalgams of the work of individual children. Seldom were children challenged to enquire further, or engage in an associated activity. The end point of one activity did not become the starting point of another. Most of the notices by teachers concerned classroom management. Some rooms exhibited rules of behavior.

The aesthetic quality of many classrooms also left much to be desired, although attempts at improvement had been made. There was much that was untidy, badly displayed or arranged, or in poor condition. Most buildings were lacking areas of bright color, varied textures, and fabrics of first-class design quality. No original works by accepted artists and sculptors were seen in any of the schools. (Such works are a significant feature of Leicestershire schools.)

Universally, the classroom climate was warm and accepting, marked by mutual respect of a high order. Children were treated with courtesy, and really listened to. In return, they acted similarly towards the adults.

Despite the freedoms, teachers were clearly in charge. There was no license for a child to behave entirely as he wished, although deviants were dealt with in a constructive, rather than a punitive, manner. It was evident that generally both teachers and children were presumed to take active roles in relation to learning, and that children were expected to behave responsibly.

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A number of sample timetables, observations of how children spent their time, and rough sketches of some classroom layouts are included in the practicum.

THE ROLE OF THE TEACHER AND THE PRINCIPAL

It was generally agreed that the role of teacher as pedagogue seeking normative responses from a class was incompatible with the concept of open education. As one principal stated, "The teachers' role has changed most dramatically . . . from didactic, authoritative to supportive, guiding and child-centered."

A number of dimensions of change were considered during classroom observations:

1. The advisory-supervisory function
2. The degree to which the teacher extends children's learning
3. The degree to which the teacher works with children and shares observations, ideas and feelings with them
4. The degree to which provision is made for many different views relating to the same idea
5. The balance of concern for the way something happens and the outcome
6. The dual function of diagnosing needs and expressing judgements
7. The degree of involvement of children in decision-making
8. The degree of encouragement of children's diverse ways of learning
9. The degree of support of other adults
10. The degree of exhibition of autonomous behavior
11. The degree of expression of the self
12. The degree of awareness of goals

Responses to the questionnaire made it clear that the monitoring and guidance of each child's learning was a high priority, but there was no general swing from the supervisory to the advisory function. Only 15% of the teachers adopted a mainly advisory role during the period of observation. A common behavior was to adopt both functions as the occasion demanded. About half of the teachers worked in this way, and the others maintained their supervisory role.

In every classroom observed, the teacher made attempts to extend children's learning, and to work with them and share perspectives. Responses to the questionnaire revealed that the teachers generally considered the extension of learning to be essential, and that most were able to effect it.

The provision of experiences which present multiple percepts in relation to specific concepts was quite inadequate. Any idea to be assimilated was usually presented in just one way.

Observation suggested that there was greater concentration on outcome than on process, but that the majority of teachers were concerned about both. High quality results were expected by many teachers, with due regard to individuality, although this was not always the case.

The teachers we observed paid considerable attention to the diagnosis of an individual child's needs at any given time; the majority also made value judgements about outcomes and events, and expressed them clearly.

The questionnaire showed that teachers thought it essential that most of their teaching should result from the diagnosis of individual interests, needs and difficulties. It was also considered that the teacher should obtain diagnostic information about a child's learning by close observation and by asking immediate, experienced-based questions. The teachers' own assessments suggested that all this is difficult to put into effect, except in kindergarten.

Responses to the questionnaire indicated that most teachers considered it essential to involve children in decision-making about acts and events which affect them. Observation confirmed that this often occurred, although there were a few instances in which no such involvement took place.

Most joint decision-making related to individuals or small groups, but many primary classes held at least one class meeting daily during which joint decisions were made. Individual or small group decision-making usually related to work in hand. Class decision-making varied from deciding which story should be read to planning a school trip.

Teachers who completed the questionnaire considered it essential to encourage children to think in their own ways, to encourage originality and resourcefulness, and to expect and encourage individual differences. The questionnaires indicated that such encouragement reaches only moderate levels, particularly with the older children.

The encouragement of children's diverse learning styles may be related to a teacher's personality. Some teachers appeared to find it difficult, and a few were able to support it always. The majority of those we observed fell into two almost equivalent groups. One group seldom encouraged diversity, and the other encouraged it often.

The degree of mutual support exhibited by the teachers was remarkably high. In every instance teachers and involved adults helped each other with alacrity and ease, indicating that such behavior was customary. Competitiveness and tension appeared to have been replaced by concern and friendliness, and this was confirmed by many of our conversations with teachers.

Autonomous behavior and self-expression were highly visible in the classrooms we observed. The questionnaire also revealed that teachers considered it essential to be granted au-

tonomy to develop what they taught and how they taught it, to work in a creative, innovative way, and use their interests and skills.

All the teachers were explicitly aware of goals, although a small number (about 10%) seemed to be unsure about certain aims.

Our classroom observations brought to light another significant dimension of change. It concerned the record-keeping function of the teacher. Most teachers kept records of children's attainment and general development, although the form varied greatly and recording was thought to be less important at the later grade levels. As with many other variables, the best record-keeping was at the kindergarten level.

It is significant to note that at no site was the role of the open classroom teacher defined in specific and complete terms.

With regard to the redefinition of the role of the principal, most thought that their role had changed, but not in accordance with any considered prescription. Changes had taken place because the open approach demanded constant support, "both moral and material." Principals realized that they had to "make more things possible," and act as a buffer and interpreter between the central administration and their own staffs. Some felt that open education would not survive unless they functioned in this way. Within schools many principals considered that they had become less authoritarian. Their own actions were "more in line with the approach." Some had assumed a greater degree of responsibility for educational leadership and attempted to spend less time on administration.

The teachers were greatly appreciative of the help and encouragement which many principals offered. Responses to the questionnaire showed that they thought it important for educational leadership to be exercised by the principal, but that such leadership was evident only to a limited extent.

THE TEACHER AT WORK

Teachers spent the majority of their time establishing and then facilitating activity which had a variety of forms and was conducted at a number of levels. They first set constraints and checked that the system was functioning well by making any necessary adjustments to the materials used and by helping individuals to focus. From then on, most of the teacher's time was spent relating to individuals or small groups about work in hand. At every grade level, much of the children's activity was directed and limited by the nature of games, apparatus, texts, workcards, ditto sheets, or by work assigned orally or in writing, so that there was no need for the large amount of direct class teaching which typified the traditional approach.

The occasions when a teacher intervenes in a child's activity in the traditional classroom are usually decided by her need to keep the child directed towards prescribed learning. There is concern for the child to achieve something pre-determined and specific. It is intervention towards closure. Often, the intervention concerns more than one child, and sometimes it concerns the whole class. Many interventions are to check children's responses, and much of a teacher's time is spent in assessing "correctness."

In the open classrooms we observed, the teachers' interventions were far more varied. In almost every circumstance, the intervention was supportive in that the teacher accepted the child as he was, focused on a critical aspect of the learning experience, and, as a result of a rapid diagnosis, contributed, at least in part, to the child's taking the next step forward. It was monitoring in a very different sense. Another differentiating characteristic was the frequency with which most teachers worked in partnership with children, rather than confronting them. Interventions commonly involved the following:

a. observing
b. informing
c. questioning and responding
d. clarifying
e. helping children organize and manage
f. direct teaching
g. extending
h. initiating
i. evaluating

Almost always the interventions were with individuals or small groups. Interventions were often deliberately spaced and sequenced with a view to providing extended support in relation to some critical factor.

An example of such a series of interventions occurred in a kindergarten class with a five-year-old boy, Larry. Larry was thumbing through a picture book without words. The teacher sat beside him, looking at the pages as he turned them. She then told the boy that they were looking at the first kind of book—one without words. "There are no words, so you'll have to read the pictures! What do the pictures tell you?" Larry had no problem in "reading" a sensible story by talking about the pictures as he turned the pages, and so the teacher left. She returned a few minutes later with another book. "Now here's another kind of book. It has words in it. There are only nine different words. If you learn the nine words you can read the whole book!"

The teacher then spent just eight minutes in a variety of teaching interactions with the child about a few of the words. He was highly motivated to learn them, and insisted on testing his new knowledge. When the teacher left, she suggested that he look through the book again in two ways, first "reading" the pictures, and then trying to read the words.

About one hour later, the teacher asked Larry if he would like her to write the words which he had learned on file cards so that he could keep them. Larry was enthusiastic, so they both referred to the book to check which words Larry knew and to engage in the writing process, one word on each card. At the end of the day, I observed the teacher confirming that Larry could read the words on the cards (he had all nine by this time), and they then discussed the fact that he could now read a book. The teacher suggested that he could read the book to other children. Larry then took the book and cards home to read to his family.

In general, interactions were individual in kindergarten and
38 first grade, even when children were together in small groups.

There were many more group interactions with the older children, although they were free to approach a teacher individually. This took place frequently about a wide variety of matters, not all directly related to school work.

The following outline of the way in which another kindergarten teacher spent the first two hours of a school day indicates something of the variety of the demands made upon her:

9:05 Meets with the class as a whole. Refers to coming trip; promises to show a relevant film strip later. Shows and discusses pictures taken by a project adviser who had visited, using them as the basis for children's inferences.

9:15 Tells children which activities are available to them (clay modelling; the sand tray; library; woodwork; small blocks; large blocks; painting; quiet games; drawing and writing; rubber stamp set; Cuisenaire rods and associated apparatus) and specifies limitations. Children disperse and begin work.

9:20 Checks that all children are working at their chosen activities.

9:23 Works with two girls on a cube puzzle.

9:28 Deals with disruptive behavior of a boy by talking to him quietly about "getting along."

9:33 Assists at the table where three children use the rubber stamps.

9:36 Helps a girl begin to make a structure with Constructo Straws by showing her how the straws fasten together.

9:39 Returns to remaining child working with the cube puzzle to check progress.

9:42 Moves to large block area and sets up a problem for the group of three boys.

9:45 Facilitates the work of individual children by sharing ideas, clarifying, and making suggestions about better management of the various activities.

9:55 Works with girl using Cuisenaire Rods and associated frames, setting problems. Suggests that a pattern of the colored rods might be the basis of a painting.

10:05	Helps a boy begin woodwork.
10:07	Child brings Constructo Straw structure for comment. Teacher discusses how the structure relates to other activities in the room, and how it might be displayed.
10:10	Returns to woodwork bench and teaches child to change the bit in a hand drill.
10:12	Checks what boy who earlier had been disruptive is doing. Suggests an extension of the activity.
10:15	Talks to girl who is now making a painting of the Cuisenaire Rod pattern.
10:18	Returns to woodwork bench to show the correct use of a saw.
10:25	Sits with a girl making word cards to match the words of a story she has written. Repeats for second girl. Engages in phonic work with both, then gives each an envelope in which to store the word cards
10:50	Announces and participates in clean-up.
10:58	Collects class together again for meeting to review the morning's activities and anticipate the afternoon's events.

Throughout the period of observation, the teacher often threw children back onto their own resources or suggested that other children might function as resources using expressions such as, "Please ask _____ , she knows how to do that." The teaching aide in the class had a correspondingly varied set of tasks.

The interactions with children were characterized by sincerity, honesty, and the degree to which each child was taken seriously. Yet there was a great deal of fun. These characteristics were very common in the schools studied, irrespective of the grade level.

At every site, teachers spent a significant amount of time in preparation and follow-up outside school hours. They engaged in a great deal of discussion, both formal and informal, and the principal sometimes participated. Meetings were held

at some sites to consider children with special needs or difficulties. Many of the teachers were also frequent participants in workshops and other staff developmental experiences. In many instances, teachers were not paid for this.

CHILDREN'S THINKING

The questionnaire revealed that teachers thought it of the greatest importance to encourage children to think in their own ways, but that they did not consider that this aspect had been developed to a corresponding level of practice except in kindergarten. Observation suggested that the majority of children felt free in this respect, but that it was most likely to happen when they were engaged in self-selected or self-initiated activities. At other times they were less adventurous, the convergent rather than the divergent form being the mode.

The younger children's thinking was constructive rather than analytic, but this in no way inhibited them. They came to conclusions rather rapidly, often on the basis of slender evidence, and used these as the basis for action. Such mental constructs were used until they did not seem to "work," at which point a new one was made.

Thinking, particularly in the primary grades, was very flexible, characterized by rapid swings between logic and fantasy. It was greatly stimulated when children were engaged with concrete objects, as evidence by the following typical conversation with a boy aged eight who had constructed a large castle-like building using a great variety of large and small blocks:

Myself: *So this is a castle?*
Student: *Yeh. And that is a trap.*
Myself: *A trap. How does that work?*
Student: *You turn this like this* (turns a long block), *it hits against that and knocks it down.*

Myself: *That's very clever. What is it a trap for?*

Student: *To keep people out because that's business stuff . . . where they keep their money and stuff.*

Myself: *Let me get this clear. You've got a castle on the left, and on the right you've got a trap. If anybody comes close and bumps into that piece of wood, the seesaw rocks and knocks over this tall tower which falls on your head and you die.*

Student: *It knocks their skull out.*

Myself: *And what did you say it was protecting, the business area?*

Student: *Yeh.*

Myself: *What is a business area?*

Student: *Where they keep all their money and stuff.*

Myself: *I see. What has that got to do with the castle? Anything?*

Student: *It's part of the castle.*

Another

Student: *Tell him about this* (points to triangular piece).

Myself: *Yes, tell me about that.*

Student: *That's a tent where they hide in.* (He picks it up.)

Myself: *You're going to move that tent now? That tent was just outside the castle, wasn't it? Where are you going to put it now?*

Student: *I'll see if it can go on there. I don't think so.*

Myself: *Why won't that big tent sit on top of that tower?*

Student: *I can make it stand.* (He searches around for additional pieces and gets four triangular shapes and two tall, narrow cylinders.)

Myself: *You're trying to make four triangular pieces stand on top of two poles aren't you? You think you're going to do it?*

Student: *Yes.*

Myself: *With just two poles?*

Student: *Yes.*

Myself: *All right, let's see. You've got two poles with two pieces on the top of each, but you haven't let them go yet. Do you think they're going to stay?*

42 Student: *No . . . I could glue them together.*

Myself: *Could you think of another way of making them stay?*

Student: *That big pole.*

Myself: *You mean get a bigger pole?*

Student: *Yeh.*

Myself: *I think that's right, but let's think of some more ways. You said you could glue them together. If I gave you an elastic band, would that help?*

Student: *It would be like all stuck together and I could put it on there.* (We then experimented with and discussed a number of balancing activities, culminating in a new balanced "trap.")

Myself: *Could you tell me a story about the trap, the balance thing we've just invented, and the castle?*

Student: *Yeh.*

Myself: *O.K.*

Student: *Once upon a time there was a big little castle. It was a little castle. It had one trap that fell and hit something, and it would make a little part fall off and it would kill the man when they're on top of the castle and it falls and it hits the castle and makes that fall. There is a secret hiding place inside of that where they keep all the money and stuff.* (Pauses.)

Myself: *When you come to the end of the story let me know. Say, "That's the end."*

Student: *O.K. And it has a little . . . What do you call them?*

Myself: *Turrets.*

Student: *Little turrets on top of it and it looks like a restaurant, but it's a castle, and in the back it has a secret door.* (Turns to me saying, "You can see it through the door.")

Myself: *I can see it. Yes.*

Student: *And on the next one there is a secret hideout. Here's the secret hideout where they keep all their money . . . good money.*
That's the end!

Myself: *Thank you very much.*

Materials such as the blocks are used for many purposes. Other apparatus, designed so that the user focuses on particu-

lar kinds of experience, provides the percepts necessary for conceptualization and stimulates children to think in particular ways. Although there was limited use of such apparatus in the classrooms we observed, the fact that thoughts could be expressed and checked through actions appeared to be a powerful aid to children's logical thinking.

A student, aged nine, was working alone with a mathematical balance:

Myself: *. . . you're trying to find the numbers that are missing from these equations?*
Student: *Yes.*
Myself: *Are you making up the equations yourself?*
Student: *Yes.*
Myself: *Should I write one for you, or would you like to write your own? . . . Why don't you write one yourself? Read it out to me as you write it.*
Student: *30 + □ = 56.*
Myself: *What was that? . . . Thirty plus box equals fifty-six. What have you got to do?*
Student: *Well, I've got to find the equation which finishes this.*
Myself: *You mean the number that goes in the box to make the equation true?*
Student: *Yes.*
Myself: *O.K. Have you got any ideas about that?*
Student: *No.*
Myself: *How are you going to find out? Are you going to use the balance? Tell me what you are doing, will you . . .*
Student: *I'm trying to find the number that goes in here* (points to □ in his open sentence) *that finishes the equation.*
Myself: *O.K. You told me that. But now you're putting some things on the balance. What are you putting on that side?*
Student: *I'm putting 20.*
44 Myself: *Is that right? Do you just want 20?* (S puts one more

washer on the 10.) *So you've put another on there. How many have you got on this side of the balance?*

Student: *30*

Myself: *What are you going to put on the other side?*

Student: *I'm going to put 50 on this side, then I'm going to get one of these* (picks up another washer) *and put it on the 6.*

Myself: *I see. So you are going to put 5 washers on the 10, which makes 50, and 1 washer on the 6. I agree with you. Now how do you find the missing number? What do you have to do?*

Student: *You have to get more of these* (picks up more washers).

Myself: *Some more washers, yes . . .*

Student: *Try it on this side to make the arm go level.*

Myself: *So what are you doing? . . . Putting 2 on the 10. So you put 20 on.*

Student: *Then a 7 . . . no, 6.*

Myself: *So that makes 26. Looks right doesn't it? Yes, I guess that's it! So what number goes in the box?*

Student: *26*

Myself: *So, now what does the mathematical sentence say?*

Student: *30 + 26 = 56.*

The conversations reported above both reveal that the children were free to think and work in their own ways within clearly defined frameworks which might be considered as small, concrete universes. Each was complex in that it stimulated and permitted a range of actions, but each was manageable.

The notion of manageable complexity is implicit in much of the activity of the open classrooms we observed, although there were few signs of an explicit awareness on the part of the teachers. The manageable quality is critical in regard to motivation, and the complexity critical in regard to thinking. The complexity both stimulates and permits thinking to take large leaps towards the formation of constructs, but it also allows the child to converge and focus through a series of sequential thoughts. Most important, there is no pressure on the child to think in a particular way before he is ready to do so.

CHILDREN'S APPROACHES TO LEARNING

There appear to have been many positive effects of open education in regard to children's approaches to learning. Many children at every grade level appeared to know what they were about, could organize whatever was needed for the task, and make a start. They were highly self-directive, and exhibited a high degree of self-confidence. In every class observed, the majority of children were able to focus on their work well, and were not easily distracted. Often children worked together. There was much more cooperation than competition. Despite the wide range of activities which took place at any one time, particularly with the younger children, there was seldom any disruptive behavior. In five of the classes which were vertically-grouped, no such behavior was observed during the day-long period of observation. The lack of it generally and, in consequence, the greatly diminished amounts of time and effort which teachers spent dealing with the problem, was a striking feature of open education in action.

Three characteristics were less well developed. These were the ability to plan ahead, self-evaluation, and the frequency with which children made appropriate decisions and saw them through to a satisfactory end. Planning ahead seemed to be within the capability of only about half the children, irrespective of their grade level. Rather less than half were self-evaluative. There were some children who seemed unable to make decisions and to see them through. The majority did so often, but the ends were often modest, and not greatly satisfying.

Many of the children appeared to be inherently motivated in that they worked for other reward than their own sense of satisfaction, yet they often seemed to be only moderately interested in what they were doing. In no class did high interest seem to be the norm, although more children exhibited it in kindergarten, first grade, and the vertically grouped classes than elsewhere.

Lack of interest may have been related to the observed lack of awareness of goals, and to the lack of challenge. Less than half of the children seemed to have an explicit awareness of the goals towards which they were working, except in the most superficial sense. Awareness appeared to be related to the levels of aspiration which children set themselves.

A significant number of children at every level beyond kindergarten were content to set levels for themselves which were far below their potential, and teachers often seemed unaware of this. One "slow" eleven-year-old working on multiplication examples such as $\begin{array}{r} 382 \\ \times\ 7 \end{array}$ was bored with the task, yet felt that she could not attempt harder examples. After a short discussion with me, it became clear to her that if the basic concepts of simple multiplication and its algorithm had been assimilated, any example could be attempted. She was then able to deal correctly with problems such as $\begin{array}{r} 40674393 \\ \times\quad\ 4 \end{array}$ and became really enthusiastic as she began to challenge herself by writing examples which involved larger and larger numbers. Again, a "bright" six-year-old girl was similarly bored with examples such as $\begin{array}{r} 23 \\ +42 \end{array}$ in her workbook. After a rather similar discussion about addition, she began to write "My Book of Addition" in which she soon set herself examples such as $\begin{array}{r} 2374 \\ +1638 \\ +1123 \end{array}$ and successfully persisted with the activity until lunchtime.

Some children, regardless of their age, appeared to have clear ideas of levels to which they aspired, as the following conversation with a kindergarten boy indicates:

Myself: *So how do you spend the morning?*
Student: *I just kinda like to read books. I like to do that stuff. I don't really appreciate playing when I'm supposed to be working.*
Myself: *You don't appreciate playing when you're supposed to be working? So what would you call playing?*
Student: *Well, if you'd like to know things I would like to do . . . then . . . Well, the things I would like to do if I didn't have work things to do in here would be*

building with either the big blocks or the little blocks, or eating snacks.

Myself: *You think that's playing?*

Student: *Well, no . . . But I do think building with blocks is playing.*

Myself: *What's the hardest work to do?*

Student: *Well, right now I'm starting on things, so everything's easy. If you want to know the easiest thing right now . . .*

Myself: *What's the easiest thing which is work? What's the easiest piece of work you have to do?*

Student: *Work in my math book right now. Soon it will be the hardest, once I get over to where S _____ is. And M _____ 's passed S _____ and when I get to where M _____ is, which is going to be a long while; maybe five or six days.*

Myself: *So, in five or six days you'll be doing hard things in math?*

Student: *Maybe. Maybe seven, eight, nine, or ten.*

Myself: *What about reading? Do you find reading hard?*

Student: *No, I find reading easy, too.*

Myself: *Reading is pretty easy, isn't it. Well . . . this book, "Dressing Up"* (I pick up a book from the rack), *can you read that?*

Student: *Yes I can read it. Just this?* (points to opened page)

Myself: *Yes.*

Student: (Reads) *"Then she sits in my teacher's chair."*

Myself: *That's easy. That's not very hard for you at all! What are you going to do now after you finish talking with me?*

Student: *Well, when I finish talking to you I'm going to go off and try and get some math to do in the math corner.*

It must be stressed that, in the majority of cases, levels of aspiration in regard to basic skills such as reading, language arts, and mathematics were not set by the children. They were closely prescribed either by texts, workbooks, ditto sheets, or by the teachers themselves. This appeared to have an inhibiting effect on many children's approaches to their own learning.

Many of the advisers considered that children were much more willing to take risks in open classrooms, both intellectually and emotionally. As a result, many children were more creative and innovative, and the majority exhibited greater confidence in either initiating something or taking off from a given starting point. One important advantage was the fact that children shared ideas with each other, and learned from such sharing. As one adviser said, "Cheating no longer has any meaning."

LEARNING OUTCOMES

Learning outcomes were characterized by their increased diversity within any one class. The outcomes differed in mode of expression, relationship to the original stimulus, and level of achievement. In general, the younger children had access to a greater variety of expressive materials, so that their forms of expression were more diverse. Children in vertically grouped classes (that is, classes composed of children of more than one grade level), irrespective of age, also produced more diverse outcomes. Although some variety existed everywhere, there were many limitations. One of our more surprising observations concerned the concentration on the use of conventional symbol systems, despite the fact that many children find it difficult to use them to represent what they think, feel, and know. Many children are highly visual, some more comfortable with three-dimensional forms, and others prefer to express themselves through movement, dance, drama, and music-making.

There was little we observed to suggest, for example, that graphic representation and the construction of objects was valued as highly as evocative writing or an elegant solution to a mathematical problem. But the most inhibiting factor was the general lack of encouragement of children to express something in more than one way. In consequence, many appeared to see each element of their school experience as isolated from every other. This is contrary to the expectation that open edu-

cation will help children integrate their various experiences and so begin to impose a personal order on the chaotic environment.

As they worked, many of the younger children changed the intended outcome. For example, a child who had learned how to punctuate sentences and had been asked to practice writing sentences about different things, began the task and then decided to write a story instead. This kind of diversity was welcomed by the teachers.

With regard to the children's achievement, many high achievers were not encouraged to get far ahead, although most teachers did not aim for median levels, and expected some differentiation. This was particularly true of children's expressive writing and their mathematical work.

Writing appeared to be inhibited by the limitations of the language arts workbooks and worksheets in use, just as in traditional classrooms, and by the fact that children were not generally encouraged to use writing as a common mode of expression from their earliest days in school. In the few classes where such encouragement and support were given—for example, where children in kindergarten who could not yet write dictated what they wanted to say to an adult who then wrote for them—the quality of each child's work showed gradual, and often dramatic, improvement.

Mathematical work, despite the availability of much appropriate apparatus, was also limited by the continued use of traditional texts, workbooks, and worksheets. The outcomes did not require the child to look at his environmnent from a mathematical viewpoint. The workbooks presumed that children had received direct teaching, but this was not always so in the open classrooms observed. In consequence, some children may have had a lesser understanding of the basic mathematical ideas than previously.

Children generally did not pay a great deal of attention to the
50 quality of their completed work. The teachers gave it more

attention, but quality still seemed to be of only moderate concern. Lack of attention to quality was evidenced by the large numbers of children who were more concerned to finish a task than do it well. Teachers often exhibited a too-ready acceptance of what a child had to offer. They gave praise without any critical comments or questions that would have drawn attention to the nature and quality of a child's response and elevated his expectations. Often, they simply categorized outcomes as "right" or "wrong."

With regard to the effects of open education on children's conventional achievement scores, of the ten schools in the sample, four reported general gains, three stated that there had been no significant changes, and the remaining three had no information available. It is important to note that, when questioned about this sensitive matter, none of the principals expected the approach to yield either depressed scores or dramatic gains.

At the teachers' group meetings, some made it clear that they considered conventional tests to be assessments of their own effectiveness rather than of children's development, but opinions were divided about usefulness. Almost all the teachers agreed, however, that test results were frequently misused. In particular, some objected to the continued publication of achievement norms in local newspapers, where it was possible to compare one school with another without any knowledge of the background factors involved.

When the teachers were asked how they assessed the effectiveness of their work, a number of subjective judgements of children's progress were outlined:

1. When children want to know
2. When they persist in inquiry
3. When children go beyond what the teacher suggests
4. When children are self-motivating and exhibit satisfaction in the self ("happiness")
5. When they are able to organize their work, resources and time
6. When children cooperate rather than compete

7. When they teach someone else something they have learned
8. When children can explain or demonstrate what they are doing, state their goals, and indicate where they are at the time
9. When children develop their own standards
10. When children pay careful attention
11. When children initiate something "sensible"
12. When children exhibit pride in accomplishment
13. When individual, rather than normative, growth and development takes place
14. When the quality of children's work and the degree of their involvement is high
15. When there is positive feedback from parents about their child's development

There was considerable evidence of teachers' increased confidence in the validity of such subjective judgements, and many appeared to be very skilled in this regard. In the open classrooms, the teachers had many opportunities to observe children closely, and this contributed to their ability to make reliable assessments.

SOME SIGNIFICANT STRENGTHS OF OPEN EDUCATION

Many of the notable virtues of the open classrooms we observed emanated from the concentration on changing the contexts in which learning took place, and the attention paid to the individuality of children. The educative process appeared to have deepened and widened. Classrooms were no longer arenas for instruction, but socializing environments contrived to foster development across a wide range. It is not surprising, therefore, that the immediate and most visible effects of this approach to education relate to feelings and attitudes. They lie in the affective domain.

It seems almost impossible to make objective judgements about such effects, and this is one of the reasons why many proponents of open education have been frustrated in their attempts to communicate about its advantages. The remarks which follow are necessarily subjective also. It was not our purpose to attempt an evaluation of the open schools involved, but it would be inappropriate for us to remain silent about aspects which we consider highly significant.

There was little doubt that empathy for the individual had improved the self-image of very many children in the classes observed. The confidence which they exhibited in familiar and unfamiliar situations was of a high order. At times, confidence ran ahead of capabilities, but apathetic, silent children who would venture nothing in school were almost unknown. It appeared that the children in the open classes had a well-developed sense of their individuality within a variety of social settings, felt comfortable with themselves and others, and could no longer be too-easily categorized according to ethnic, social or other criteria. They were becoming aware of what they did best, and coming to terms with their weaknesses. One of the most encouraging effects was the blurring of the differences in attitudes, behavior, and attainment among children from different backgrounds. Certainly, any notions such as the view that certain minority group children do not use an elaborated code of language when they speak, that they seldom connect statements together logically, and have other linguistic limitations when compared with Caucasian children, were largely dispelled by our conversations with children as they worked.

Other virtues related to the freedom accorded children in the open classes. This freedom varied greatly in nature and degree, but most teachers attempted to manipulate the levels so that individuals could manage them. Such freedom invariably involved choice, and always presumed that a child would learn to make appropriate responses. The recognition and support of individuality, and the expectation that children are capable of making significant choices within a wide variety of contexts,

relates to the growth of a self-directing, responsible person. There were many signs that this growth was beginning to occur within the schools.

Parents confirmed that children also were acting differently out of school. It was reported that they were more helpful, took on more tasks and saw them through, and had no difficulty in occupying themselves, whereas siblings in traditional classes were always asking, "Now what am I supposed to do?" One parent of a fourth grader stated about his son:

> *He is never absent, and his attainment is very reasonable . . . but the fact that he enjoys school and the quality of the relationships, well, I wouldn't trade that for a couple of years of reading ability!*

Many parents also confirmed that their children seemed to be more alert, interested, and generally aware.

> *The kids have been taught to express themselves. I have a ten-year-old. I can't shut him up. He wants to know things all the time.*

The changed pattern of relationships between school and home is another significant strength of open education in the United States. Parents were offered a wide range of opportunities to participate in the life of the schools studied. Many assisted in classrooms on a regular basis, in addition to the more normal activities such as fund-raising or helping teachers to take children on trips. In several of the classrooms observed, the addition of parent volunteers helped to reduce the ratio of children to adults to less than 5:1. Some parents ran workshops for other parents, such as sewing courses and craft activities. Certain schools set aside a space specially for parents. At one school, one published objective was, "To provide services to families of young children such as day care and adult education for parents and to create a supportive environment and services adaptable to families' needs." This would seem to be a far-reaching step beyond the traditional function of the institution.

Parents were also included in the planning and decision-making at several of the schools. Decision-making groups with a formal status, such as a Parent Council or a Parent Advisory Committee, existed at several sites, and their power was real. In some instances, parent members were involved in the hiring of teachers. In many of the schools, parents were employed as classroom aides, and, at one site, such aides were encouraged and helped successfully to follow the lengthy path towards qualified teacher status. Such developments are much further advanced than corresponding movements in Britain.

In all the schools studied, parents stated that they felt much closer to the open classroom teachers, and they appreciated this very much. They felt that they could talk to the child's teacher at any time. The hesitation, and occasional fear, had gone. One parent said, "If I felt my child was unhappy, I'd have no hesitation in approaching a teacher and saying so, and would expect a concerned response." Another parent suggested that open education had enabled both parents and teachers to see each other as people.

Several parents made some interesting comments about ways in which their children's involvement in an open approach and their own close links with the school had affected their own behaviors and attitudes. One expressed it this way:

> *I've learned so much about myself . . . . I really behave differently with my youngest child. I can't say, "I don't have time," to him now.*

Parents' expectations are a function of their own education, of the ways in which schools traditionally have communicated with them, and of what higher education and the job market demand. Some teachers in the schools studied had begun to deal with parents' preconceptions of what it was like to learn in school by running workshops to provide personal experience of the open approach. These teachers also experimented with new ways of keeping parents informed about their children's progress. Contact was no longer precipitated only by crisis, and communication about the child was no longer merely in

the cryptic form of marks and grades. Parents who have enjoyed such experiences, together with the increasing number of those who contribute in some way to the day-to-day life of the schools, now form a core of advocates of open education who are adamant that it should continue and flourish.

Just as open education appears to have contributed to bridging the gap between home and school, so it has brought teachers closer together. The changes implicit in the approach have led to much closer relationships among the staff in regard to their professional work. Ideas, once kept secret, are now willingly shared. Everywhere, teachers felt a greater sense of satisfaction in their work. Many who had pioneered a more "child-centered" approach found that the introduction of open education had validated their own views and practices. Everywhere it was accepted that open education presumed a recognition and valuing of the individuality of teachers as well as children. The positive effects of this cannot be overestimated. One of the most significant outcomes has been the emergence of a small cadre of superb teachers who are the potential leaders of open education in the near future.

With regard to provision of materials, administrators and principals did not consider that open education, unlike some other innovative approaches to education, required special facilities or significantly greater financing. Some principals thought that larger teaching spaces were advantageous, but in no case was the approach specifically related to open-plan buildings. Less formal furniture was required, but the total cost was no higher than that for the traditional room. The initial equipment of an open classroom was said to be more expensive because there were more manipulative materials and equipment for experiential learning, but running costs were no higher, although allowances might be spent differently. For example, there might be less spent on texts and more on expressive, consumable materials such as paper of many kinds, and art supplies. It was widely agreed that there was no need for a special staffing ratio, but that the accent should be on quality. Advisers and teachers generally thought that class size did make a difference, although much depended upon the teacher, the chil-

dren, support services, and other constraints. They suggested that 25 children per class should be the maximum number.

One of the less obvious virtues of open education, yet of great significance, has been the recognition of the teachers' need for support systems additional to those of the traditional elementary school. All the schools we studied had access, either then or at one period of their development of the open approach, to sensitive, skilled persons known as "advisers." An adviser is not a curriculum consultant or supervisor, but is concerned to relate closely to teachers about every aspect of work in the best interests of the children. In the schools studied, advisers provided help of the following kinds:

a. Arranging and/or conducting workshops
b. Working in classrooms with children
c. Observing in classrooms with a view to working with teachers later
d. Working with administrators and meeting with them about issues
e. Working with parent groups
f. Working at a teachers' center
g. Developing curriculum materials
h. Writing reports and papers
i. Working with consultants
j. Providing materials for teachers
k. Dealing with visitors
l. Going elsewhere to learn more

In no instance was any adviser able to spend more than 50 percent of her time working or observing in classrooms, and at one site this figure was only about 25 percent. Everywhere, time spent working with administrators and meeting them about issues was increasing. At one site, the adviser considered that she spent almost as much time writing reports and papers as she did working with children and teachers. Comparatively little time was spent by advisers anywhere in developing curriculum materials. The average length of the teaching experience of the advisers interviewed was fourteen years, and their average service in their present posts almost four years.

At one of the meetings with groups of teachers, the matter of the confidentiality of the relationship between adviser and teacher was raised. Teachers felt strongly that advisers should not be required to report to the principal or other administrator in authority, and they stressed that the adviser could only be truly effective if the staff developmental role was separated from that of the evaluator.

The teachers also specified a number of personal qualities and behaviors which they expected of advisers. These included the ability to listen and inspire trust, and the ability to establish and maintain the necessary rapport with individuals from which growth can ensue. They also expected advisers to model the behaviors which they proposed, be able to do what they suggested, and evidence excitement about learning and teaching.

SOME SIGNIFICANT WEAKNESSES OF OPEN EDUCATION

The study revealed that schools which are said to be practicing open education are unlikely to be doing so throughout. The concentration is in the early grades. The low incidence of open classes beyond the primary grades is both discouraging and irrational. A case could be argued that the responsibilites implicit in open education are most easily accepted by the older elementary school children, and that they are more able to plan their work, carry it out, and assess the results. More important, many of the effects of open education may take time to mature. Why terminate open education before the benefits accrue and become manifest?

Much attention now needs to be paid to developing the open approach at the fourth grade level at least through the sixth. The children's experiences cannot be more of the same, and very careful consideration must be given to content, form, and context. Some parents expressed concern that there was no guarantee that their children would be able to continue with the open approach throughout the elementary school. Concern was also expressed about what would happen to their children as they reached subsequent levels of formal education:

> *. . . upper schools must be educated now if they are going to be ready for the kids. We don't want the kids to lose what they have started.*

While it would seem reasonable to offer both parents and teachers alternatives within one school, provision must be made for continuity, and for modifying choices in the best interests of individual children.

One of the chief weaknesses of the open approach at its present stage of development in the schools we studied is the inability to demonstrate the advantages for children except in the most sterile, conventional terms. In consequence, very few

teachers felt that they had the freedom to capitalize fully on the quality of the classroom relationships and the confidence, interest, and vivacity which the majority of children exhibited. As one adviser stated:

> *There is an element of faith that open classroom teachers, for the most part, have in their students. And there is a certain amount of faith that most principals and many parents have in the teachers. But it only goes to a certain place. It stops short, asking for closure, asking for standardized check-ups, not quite trusting the informed assessment of the teacher, wanting some "official" assurances that the children are learning.*

Such contraints are grossly inhibiting. They led to a great deal of heart-searching among the teachers, and may well be the reasons why openness was seen to be a missing ingredient from so many intellectual pursuits. At times, it was as if the runners were both physically and emotionally tuned-up for the race, but nobody fired the starting gun. Humanistic elements are a necessary pre-requisite to optimal growth, but a child's well-being need not be at the expense of the full development of intellectual potential and the pursuit of excellence. Indeed, if open schools cannot accommodate to this principle, they will have failed.

There were some general observations which relate to this problem, and some particular ones. We noted that much of the children's learning was closely prescribed both in regard to level of difficulty and eventual outcome. The activities were matched by the teacher to the level of attainment of the child, rather than requiring the learner to decide the level to which he aspired, and almost no activities were open-ended. They had a specified outcome. These characteristics, coupled with the paucity of enquiry and experimentation, are antithetical of the notion of a truly open approach. They relate closely to the
60 closed curriculum.

With regard to particular examples, although significant gains have accrued in relation to spoken language, there was no corresponding and general breakthrough in children's written expression. Given that today's communication is largely audiovisual, schools might put this forward as a reason for their apparent lack of concern about children's reluctance to turn to writing as a natural mode of sharing what they know and feel strongly about. But no such reason was proffered. It would simply seem to be that the majority of teachers do not think writing sufficiently important, or do not know how to capitalize on the many opportunities which occur when children are stimulated by something they have found out, made, or experienced. It would be a relatively simple matter to use such occasions as the starting points for written expression, even with children who would need varying degrees of help.

At the same time, a structured approach to writing from kindergarten onwards could be in progress. Such is the case in Britain, and it has yielded very satisfactory results. In the one or two schools in the study where a similar approach had begun, the results were equally encouraging. Unfortunately, there was no guarantee that good work begun early would be built upon through the grades. Open classes offer the best possible opportunities for children to write to some purpose and a demonstration of what could be accomplished joyfully by children of all abilities who are continously encouraged and supported would be a major contribution at this time.

The opportunity which open education provides to show what children can achieve in writing is not the only opportunity which was being ignored. Elementary mathematical learning was still dull, despite the availability of materials which could make it come alive for young children. Of all the elementary school subjects, mathematics is the most abstract. The numbers with which children are concerned do not exist. They are the abstract properties of sets: ideas in the mind. We represent numbers by numerals, and it is these which the children see printed in textbooks and which they write themselves. De-

velopmental psychology, which bears a close relationship to the open approach, suggests that the young children in elementary schools are at the stage of their cognitive growth where the development of secure concepts depends upon direct experience of things concrete rather than of symbols alone. This was one of the chief reasons why mathematical materials were developed in many countries to be used by children to establish concrete analogues of mathematical operations and relations.

It may be difficult to introduce such materials into traditional classrooms, but they match very well with the open approach and have contributed to its advance in Leicestershire and elsewhere. Some of these materials were present in the open classrooms we observed, and moderate use was made of them in a few places, but their full power was not evident because they were mainly used to supplement texts and workbooks. If children's concepts developed as a result of carefully sequenced work with the right structural materials, and the texts and workbooks were subsequently used selectively to provide appropriate practice, understanding would improve considerably. As attainment depends upon such understanding, achievement would also increase.

So why does this not happen? The reasons are several. There is, at present, no national concern to use such materials and they are not widely known in the United States. The new American approaches to mathematics rely heavily on printed matter and symbol forms, and a great deal of teaching is still involved. The schools in the study used texts which resulted from such developments and most teachers had no idea that there was another way for children to learn. The manipulative materials which were available were not necessarily of the right type. Not all were designed to relate closely to mathematical structures and processes. Again, some teachers did not know how to use the materials for optimal effect. They had little notion of the potential of the alternative approach, and felt that nobody was available to provide the constant help and support required in the early stages of its introduction.

The restrictions imposed upon children's cognitive activity raise the issue of whether or not many children were underachieving. It was made clear that they were reaching normative standards, with due regard to individuality, but we suspected that many could do much better. Open education should provide for children to get ahead as far and as fast as they can, but this was not the case in many instances.

There is no reason why the present curriculum should not allow for differentiation in regard to achievement levels. The problem chiefly arises from the lack of suitable learning materials. Publishers have contributed little to the development of the open approach. There are few products which are compatible, and one adviser suggested that some publishers have tried to fool teachers by packaging traditional materials in new ways. Conventional texts are designed to generate closure. They are based upon assessments of normative achievement, and learning proceeds in small steps, closely monitored by the teacher. Such texts work against the notion of open education.

An open approach presumes that attainment levels will be grossly differentiated, that children will differ in regard to their cognitive styles, and that they will think in their own ways. There will also be variation in the pace and rhythm of learning. Sometimes children will take large steps forward to confront complexities which they think they can master. At other times, they will follow the linearity of small, sequential steps. One cannot prejudge this, but it must be allowed for. Almost all texts, workbooks and ditto sheets in use in the classrooms we observed met none of these requirements, particularly in regard to mathematics and the language arts.

Perhaps the most widespread problem concerns staff development. As with all approaches to education, the most critical variable in open education is the quality of the teacher. Many of the teachers associated with the study were of very high calibre. They were people who were fully grown-up in every sense of the term, yet for whom childhood was precious. The demands made upon them were extraordinary, for that is

the nature of the approach, yet little serious consideration had been given to their varied developmental needs.

All the teachers put the highest value on their own development. They considered it to be the main factor which decided whether or not open education flourished. Informal discussion with a small group of teachers in one school made it very clear that they wanted to be helped to do things *well*, and that many of the formal courses and workshops available did little to contribute to this goal. Two statements by teachers suggest the reason why:

> *Most courses offered to teachers are inferior because they are so* superficial. *Teachers are not offered depth.*
>
> *Why don't we use the same theories for teachers' learning as we now use with the children? For example, if we want them to learn about bugs, we provide a great variety of experience and come at it from all sorts of angles, using all the senses. It is so much more satisfying to study something in depth and have a masterful knowledge of it than to have a smattering of knowledge about lots of things.*

Advisers also had some suggestions to make about more effective development practices for themselves. They thought that they needed to visit other sites which were relevant to their own, first to observe advisers, and then to work alongside them. One adviser considered that a period of about three months would be needed for this. The advisers also expressed the need for an on-going relationship with people who could give them advice and support. This relationship should provide at least one opportunity for them both to engage in an experience together. There was also talk of longer sessions when advisers would meet together to consider issues and developments free of their normal responsibilities. One adviser suggested that it would be important for her to teach a class again for six months, and to be given free rein. One adviser was

almost despondent about her continuing growth and development:

> *The staff development person has to be supported and helped to grow, and who is doing that? I am really looking, and asking if it is foolish of me to continue in this role without further training and development. I've tried to sort out for myself what my primary needs are, but one has to ask, "Can this really be an on-the-job training position?" But if it can be, then who is going to build it in, and how?*

The staff developmental activities available varied greatly among the sites, but no special provisions were made for staff who were at different stages of development. Until this imbalance is redressed through a variety of procedures, teachers and others who have progressed beyond the level of need of merely being informed about open education and its practice will continue to feel that their own growth and development has been stunted.

FURTHER DEVELOPMENT OF THE OPEN APPROACH TO EDUCATION

The study provides ample evidence that open education is not likely to become the single approach to the education of children in American elementary schools. From the teachers' viewpoint, open education supports the development and effective learning of many different kinds of children, but it is not appropriate for all. Some teachers stated explicitly that certain children required more structure than could be provided in an open context, althought they stressed that any deficiencies lay within themselves rather than with the approach. It was suggested that as many as one third of all children might be in this category at the present time.

Given that open education will become one alternative among several, means must be found to communicate about it to those who must make the choice. Several principals and superintendents involved in the study said that they had experienced difficulty in explaining the term to parents and others. The schools studied were not examplars of one clearly defined approach; they represented individualized attempts to provide a more liberal institutionalized alternative, thought to be in accord with the essential nature of children. The central quality of the approach everywhere was not that it was necessarily "open," but that it was *responsive*. Communication might now become easier if the term "open education" was dropped in favor of "responsive education."

A change of name may be helpful, but it is doubtful whether parents will be able to make appropriate choices about this approach to education until it becomes more visible in the community. Such visibility will increase if the schools extend their educative domain beyond their own walls. The excellent beginnings in making school and home mutually supportive to children should be extended. Responsive education cannot mature if a school stands in isolation. But parents will need to understand that opting for the approach for their children implies a form of schooling which heightens sensitivity to the satisfaction of internal rewards, which engenders positive interpersonal relationships and acceptance of the self, and results in gross differentiation in regard to achievement. The objective is the realization of the full potential of the individual rather than the attainment of modest levels by all.

Some parents, teachers, and others will insist that these qualities are not the prerogative of responsive education; that they apply to traditional schools also. Our study did not compare traditional and responsive classrooms, and our only "evidence" of gross differentiation comes from those teachers who formerly taught in a traditional manner. They spoke of the completely different ways in which they presently worked and in which children learned. The passivity of children in traditional classes, their concentration on pencil and paper tasks,

highly competitive environment, and the teacher's concern to keep the class together were frequently mentioned as some of the characteristics which were changing dramatically with the development of responsive education.

Once parents have made a choice, there will be an expectation of positive effects. If such accountability, tempered by reason, is demanded, schools must be in position to respond. This will only be the case if a number of critical issues are attended to. They relate to staff selection and development, the provision of suitable learning materials, and to the management of the approach.

Clearly, some intending teachers will be unable or unwilling to work in the required manner. The approach demands adults with energy, ability, sensitivity, and imagination who can diagnose and then satisfy the needs of individual children so that they come to understand the relationships among elements of present and past experience in such a way that children's unique potential is realized. All this must be orchestrated and managed in a complex learning environment in which choices are real, responsibility cannot be avoided, social interactions are meaningful, and progress is self-evident. Undergraduates who aspire to teach in this manner may need a different kind of teacher training, and should certainly be exposed to practice in schools which are using the approach. It is not acceptable that newly qualified teachers should learn "on-the-job."

Once teachers are in schools, they must come to accept that their professional growth must be continuous. Staff development must be adequately financed and designed so that it responds to the real needs of individual teachers, who are then enabled to respond to the real needs of children. But a problem exists in that many teachers appear to have difficulty in making their needs explicit. In part this stems from a myopic view of their professional status. Some do not seem to realize that the teacher as a professional is obligated continuously to engage in self-reflection and self-renewal. Others have no faith that the administration has the capability to respond to needs in anything more than a superficial manner.

Teachers who are using the open or responsive approach will certainly have needs which are different from those of teachers who continue to teach in the traditional way, and the acceptance by administrators of alternative approaches implies the provision of alternative forms of staff development. More than this, there must be differentiated forms of staff development which accommodate to levels of experience, depth of understanding, and day-to-day responsibilities. Care must be taken to build in the flexibility, depth, and quality which will satisfy teachers, principals, and advisers who are trying to demonstrate what can be achieved by the approach. If this does not happen, the best people may give up the battle and present gains be lost. The whole issue must be investigated urgently.

However effective the staff development, we must accept that there will never be a superfluity of the most able teachers. Several schools in the study are demonstrating that there are different ways in which such valuable "resources" can be used. The approach also provides an opportunity to investigate further some differentiated staffing patterns for elementary schools.

The provision of suitable learning materials is perhaps the greatest need in regard to the further development of an open or responsive approach. Although it might be considered ideal for every teacher to formulate a learning experience and provide the necessary materials for each child all the time, it is clearly impossible for this to happen, and there would be no guarantee that every teacher would have the necessary expertise. The unsuitability of mathematical and language arts texts and associated materials has been stressed, but similar problems exist in relation to science and studies of the environment. Many of the texts in use in the schools lead to reading rather than direct experience. Of course, reading and doing are not mutually exclusive; and there is a third essential ingredient, the teacher.

In mathematics particularly, what is needed for the younger children are materials which relate concrete experience to the

formal symbolism in such a way that powerful concepts accrue. In general, the teachers we observed appeared to need materials which assisted the sequential growth of hierarchical ideas, provided open-ended practice, and helped children to make their knowledge explicit to themselves and others. Additionally, such materials should not require the continuous intervention of the teacher, but speak directly to the individual child, or to small groups. If such materials exist (and some do in Britain, although they may not be entirely suitable) they must be identified and considered by teachers for possible use. If not, they must be developed, with constant reference to teachers. This matter is also urgent.

There are management issues as well. They concern the selection of children for whom the approach would seem suitable; critical mass; and the monitoring of progress. Our study suggests that open or responsive classrooms function best when the group of children included is heterogeneous. It seems important for the group to vary in ability, attainment, and even in age. We know that children learn much by modelling their behavior on that of their peers. So that it is not surprising that the younger and less able children will aspire to the accomplishemnts of others if they share the same classroom. The study also confirmed that older and more advanced children gain in their explicit realization of what they know when they engage in incidental teaching. If classrooms are to be self-contained, the composition of any class will need careful consideration, and it may not be in the best interests of the children to bow completely to parental choice. Ways of combining parental choice, teachers' knowledge of the children, and the need for variation within the group must be found, bearing in mind always that some changes will be necessary subsequently.

The number of classes which constitute a critical mass in regard to mutual support and further development is difficult to assess. In the schools studied where open education was an alternative there was a tendency for the staff to divide into two camps, but the number of classes using the approach was

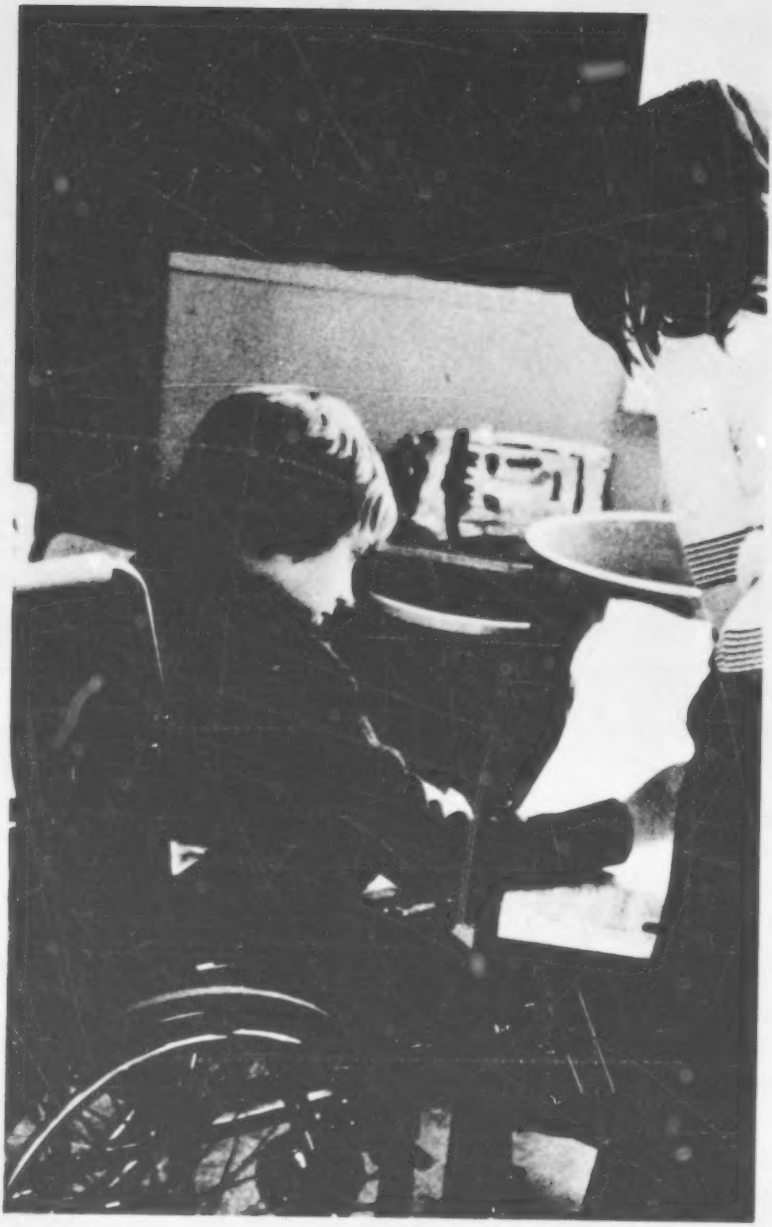
sufficiently large everywhere for them to have visibility and impact. Yet the coexistence of the different approaches was a restraining influence on both. There is much to be gained by considering the school as the unit, rather than the classroom, with the principal and all teachers committed to one approach. The schools in the study in which this was the case were small, and they had a unity of purpose which was sufficiently strong to carry along inexperienced teachers, and establish a strong sense of community. School size may well be a critical variable in relation to high-quality education. If responsive education is to flourish as an alternative in larger schools, our study indicates that open classes and their teachers need to be physically close, and that strong, highly visible support of the principal is essential. The nature of a principal's support for every member of staff will be complex and personal. It will include concern for professional growth, a monitoring function in regard to practice (played in very low key), and acting as a resource for personal matters which a teacher might wish to raise.

The monitoring of children's progress in the responsive classroom is an issue with which the teachers require competent help. The main concern must be to document what children have learned, and their development, in such ways that it may be communicated to a number of constituencies. Such monitoring should pay attention to the growth of the children's explicit awareness of what they know, and help to ensure that outcomes are accumulative and persistent, rather than short-term and immediate. Traditional forms of assessment cannot be disregarded entirely, nor need they be. The schools made it quite clear that they expected the children to achieve much that is basic to the traditional approach. Differences relate to stages at which such achievement should be assessed, and the fact that such information provides an inadequate profile when it stands alone. Although some schools in the study were exploring new ways of knowing and communicating about children, the whole field demands serious attention. If manageable, effective methods are not found, the public image will remain obscure, and responsive education suffer as a result.

This study of selected American elementary schools was a rich experience, yet not entirely satisfying in that one was left with the nagging impression that the crop might spoil before the harvest could be reaped. The development of the responsive approach has been rapid, but it lacks depth. It appears to be coalescing prematurely in response to irresistible pressures from a society that demands instant everything.

We are impatient for success in the field of education, yet often far too willing to decide that one approach has failed and then scurry around for another. The study reveals quite clearly that responsive education is at a fragile stage of its development. This is not the occasion to make a premature, final judgement, but it is the time to consider the balance between expected outcomes and the required investment of time and resources. This study has strengthened our belief that responsive education is a necessary and highly effective alternative for many elementary school children, and that there must be serious, national concern to improve the practice. It seems inevitable that schools will acknowledge that there are many ways to learn. As Thoreau wrote:

> *If a man does not keep pace with his companions,*
> *perhaps it is because he hears a different drummer.*
> *Let him step to the music which he hears,*
> *however measured or far away.*



APPENDIX

THE SCHOOLS
THE QUESTIONNAIRE
AND ITS ANALYSIS

THE SCHOOLS

Site A–District Six, Philadelphia

This is an inner-city site. The study concerned three elementary schools which serve a mainly black population.

The Fulton School has children of pre-kindergarten age through fifth grade. It has approximately 750 pupils of whom 95 percent are black and the remainder white. The building is a typical "three-decker" built in 1905.

The John Wister School has approximately 850 children and extends from kindergarten through fifth grade; 98 percent of the children are black. The school was built in 1955 and is on three levels spread out in wings.

The Kelly School is the largest of the three. It has 1,073 pupils from pre-kindergarten through to fourth grade only, of whom 90 percent are black and the majority of the remainder are white. The building is of a "pod" design with many open teaching areas. It was completed in 1970.

The site was one of the first to be included in the Follow Through Program. Since the program's inception in 1968, the sponsor has been the Education Development Center of Newton, Massachusetts. EDC has a long association with open education and has initiated a number of important projects within the domain.

Although the district as a whole is committed to open education, the approach has been developed mainly in the Follow Through classes.

Site B–Berkeley Unified School District, California

This is an urban site, but it is not in the inner-city. The study concerned two schools which serve a very mixed population.

The Early Learning Center is a small school which combines a nursery and primary program for children aged three to eight. At the time of the study it had 68 children. The ethnic composition was as follows:

62% White
23% Black
9% Asian
6% Chicano

The folder describing the Early Learning Center states:

> *An open classroom curriculum for improving the basic skills of reading, writing, and math is helped by the open building environment and an integrated skills/subject matter approach.*

The Early Learning Center is a practical example of the philosophy that a school and the family should share the responsibility of meeting a child's learning needs. Accordingly, the program operates year-round, integrates the instructional and day-care components, and offers an extended day from 8:00 a.m. to 5:30 p.m., including a hot lunch and snacks, but it also requires that parents be directly involved in the overall functioning of the school.

The John Muir Child Development Center is a primary school with 471 pupils from kindergarten through third grade with ethnic backgrounds as follows:

52% White
40% Black
5% Asian
3% Chicano

The program was designed by the director (the school principal) in the spring of 1971 to be available for parents who opted for it. It stresses the "open classroom concept" as the basic approach, with a heavy emphasis on staff development and the maintenance of close working relationships between the school staff and the family.

Both the Early Learning Center and the John Muir Child De-

velopment Center form part of the Berkeley Experimental Schools Project supported by the U.S. Office of Education. The BESP attempts to respond to the needs of students and parents by creating educational alternatives and models for educational change. In the John Muir school, 17 of the 20 classes are part of the BESP, so parental choice exists even within the school. The school is also associated with Follow Through, using the Bank Street College model. Five of the 17 BESP classes are also in Follow Through. Bank Street College in New York City is closely associated with the open education movement in the United States. At one time it received a grant from the Rockefeller Brothers Fund to establish a Center for Research and Training in Open Education.

Site C–Hamden New Haven Cooperative Education Center, Connecticut

This site relates both to a suburban (Hamden) and an urban (New Haven) population. More than 60% of New Haven residents are members of minority groups. The majority are black and there has been a great influx of Puerto Ricans.

The school extends from kindergarten through grade three and has 205 children of the following ethnic backgrounds:

50% Black
25% White
24% Hispanic
1% Asian

The classes involved in the study were those included in the Follow Through Program. Again, the model here is that of Bank Street College, and the association has persisted since 1967. It was one of the first examples of an open approach in the nation.

The building was completed about 1960. It is of simple design, with self-contained classrooms of modest size on either side of a long corridor on each of two levels.

Site D–Ferndale, Washington

This is a rural site. It is situated about fifteen miles south of the Canadian border en route from Seattle to Vancouver. A reservation of the Lummi Indian tribe is nearby.

The Mountain View School serves 600 children from kindergarten through third grade. The ethnic composition of the school is as follows:

83% White
12% American Indian
5% Chicano

The school is aptly named. The snow-capped summit of Mount Baker dominates the view to the east from the school grounds.

The original school building was completed in 1960, but a new wing was added in 1968/69. The addition includes a very large open area which houses four classes. The whole school is on one level and there are excellent outdoor facilities.

The Mountain View School is included in the Washington Triad Follow Through project which combines schools from three districts. The program sponsor is the University of North Dakota's Center for Teaching and Learning. The Center for Teaching and Learning grew out of the university's New School for Behavioral Studies. This was established mainly to prepare teachers for open classrooms in the North Dakota elementary schools. It is now generally acknowledged that the Center is one of the leaders in the field of open classroom teacher training. The Follow Through model is an adaptation of the British infant school approach and is now in its fifth year of implementation.

Site E–Waxahachie Independent School District, Texas

This is a rural site situated about twenty-five miles south of Dallas. The study concerned the two elementary schools.

The Marvin Elementary School extends from kindergarten through fifth grade. It has 987 pupils and the ethnic composition is as follows:

61% White
24% Black
15% Chicano

The number of Mexican Americans is increasing. Approximately 400 children are transported to and from school daily from the surrounding areas.

The school building is in two sections. The main two-story part is more than sixty years old, but three additional open-space areas have been added in the last three years to form a connected second section. These are spacious and well-designed. Each has one or more stepped arenas excavated into the floor, locally known as "kivas." The original building houses the teachers' center and an audio-visual facility which includes a small studio for the production of video-tapes.

Northside Elementary School also extends from kindergarten through fifth grade. It has 739 pupils of whom more than 200 are bussed. The ethnic composition is as follows:

62.1% White
28.5% Black
9.1% Chicano
0.3% American Indian

The original building was completed in 1960, but an open-space area was added in 1970/71.

This site is the only public one in the study which has no formal relationship with any project. Its one unusual feature is that the stimulus for the introduction of open education emanated from the top. It was the superintendent of schools who provided the initial stimulus and who is still a major driving force.

Site F–Convent of the Sacred Heart, Greenwich, Connecticut

This site represented the private schools sector. The school serves a selective population. The local town is mainly a suburban community of approximately 60,000 persons of whom more than 97% are white. Students come from a wide area,

although this is less true of the younger ones with whom the study was concerned.

The school describes itself as "college preparatory" and is run by the Society of the Sacred Heart, a Roman Catholic teaching order established in France in 1800. The school was founded in 1848 in New York City and moved to Greenwich in 1945, where it is housed on a 112 acre property set in the countryside. The school is coeducational only up to the fourth grade. Beyond that it is for girls only.

The school is divided into three sections, the Senior School (grades 9-12), the Middle School (grades 5-8), and the Junior School (kindergarten—grade 4). There are 165 pupils in the Junior and Middle Schools, but the study was concerned only with the 110 children up to and including grade 6. Of these, 89% are white and 11% black.

The site houses the Teachers' Center at Greenwich.[1] This is an independent non-profit organization which was developed to offer support to teachers and others interested in "an informal, open approach to education." It is supported by private foundations supplemented by fees charged to workshop participants. The Center attempts to form links with public school districts, colleges, and other educational agencies. It has no special relationship at the present time with the Sacred Heart school, but the director of the Center, a British teacher experienced in the open approach, had formerly been on the Junior School staff and was largely instrumental in inducing the approach. Open education has been developing in the school since 1968/69.

British Schools

The three British schools visited briefly were:

1. Sherard County Primary School, Melton Mowbray, Leicestershire
2. The Hall Junior School, Glenfield, Leicestershire
3. Prior Weston Primary School, London

[1]This Teachers' Center closed February 1977. The former director, Celia Houghton, is willing to respond to questions. She can be reached at Goddard College, Plainfield, Vermont 05667.

FACSIMILE OF QUESTIONNAIRE

School _____
Grade _____
Date _____

QUESTIONNAIRE: The Nature of Open Education

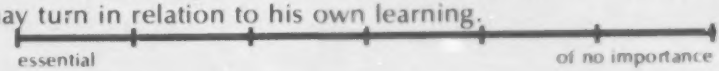
"Open education" has many meanings. Some of the qualities frequently associated with open education are specified below. Please indicate your view of the importance of each statement by marking an X at the appropriate point of each corresponding line segment.

Views do not always match practice, but it is also important to know what actually happens. This can be shown by marking a √ on every line segment. Thus, on every line segment there should be one X and one √.

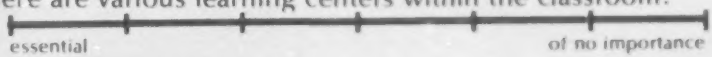
A. The Environment for learning

1. Children are non-graded

2. The classroom has many different resources to which a child may turn in relation to his own learning.

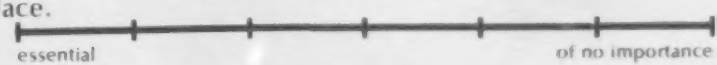


3. There are various learning centers within the classroom.

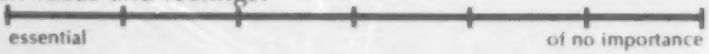


4. The whole school is considered as the learning environment, not just the classrooms.

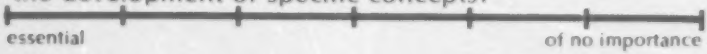
5. Materials for learning relate to work in hand, and extensions of such work, rather than determine and limit what can take place.



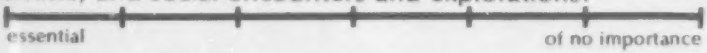
6. There is an abundance of raw materials (paper, paint, wood, clay, scrap, etc.) through which children test out and express their ideas and feelings.



7. Many appropriate structured concrete materials are available for the development of specific concepts.

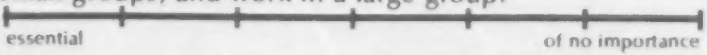


8. The classroom provides for verbal, aesthetic, mathematical, scientific, and social encounters and explorations.



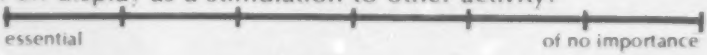
9. There is space for quiet activities, noisy activities and messy activities.

10. There is space and facilities for children to work alone, work in small groups, and work in a large group.



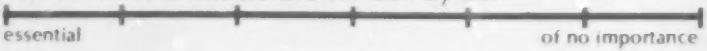
11. The classroom is organized in such a way that it enables children to be independent in their use of available resources.

12. There is space for work in progress, and finished work, to be left on display as a stimulation to other activity.



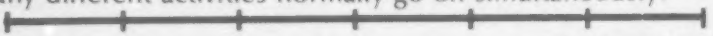
*13. Texts and materials are not available in class sets.

*14. Every child has a personal storage space, but the classroom and its facilities available are for use by all.

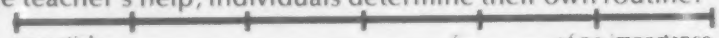


*15. Materials for learning are readily available to children.

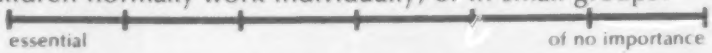
*16. Many different activities normally go on simultaneously.



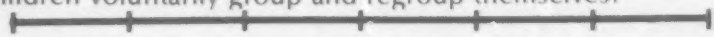
*17. The day is divided into large blocks of time within which, with the teacher's help, individuals determine their own routine.



*18. Children normally work individually, or in small groups.

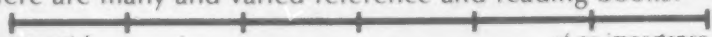


*19. Children voluntarily group and regroup themselves.



*20. Children are free to move about the classroom without asking the teacher's permission.

*21. There are many and varied reference and reading books.



*22. The emotional climate of the classroom is warm and accepting.

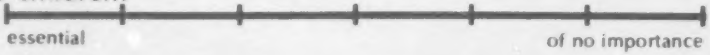
*23. The work that children do is not divided according to subjects.

*24. Children's activities, products and ideas are reflected abundantly in the classroom.

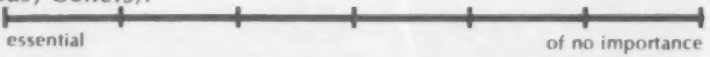
25. Children's work relates to and reflects the nature of the

community in which they live.

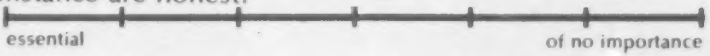
26. The school communicates and interacts with the community in a variety of effective ways which relate to the education of the children.



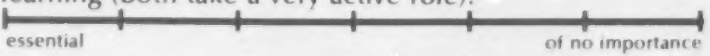
27. There is mutual respect for persons (actions; thoughts; ideas; beliefs).



28. The encounters among children and adults in every circumstance are honest.



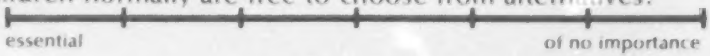
29. The inputs by both teachers and children are high in relation to learning (both take a very active role).



30. Educational leadership within the school is exercised by the principal.

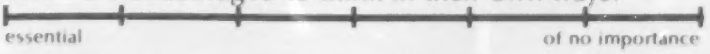
B. Child behaviors

1. Children normally are free to choose from alternatives.



2. Children set their own levels of aspiration (decide how difficult to make their work).

3. Children are encouraged to think in their own ways.



4. Children's understanding has an experiential base (under-

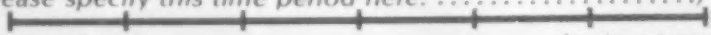
standing should arise from active interaction with reality).

5. Children are free to follow and extend their own interests.

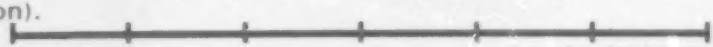
6. Children, rather than their teachers, decide on the point of closure in relation to their own learning (decide when an activity is "complete").

7. A child's learning follows the cyclic pattern of PLAY (initial experimentation), STRUCTURE (directed experience to focus activity with specific learning in mind), and PRACTICE (experience throughwhich the learner checks and deepens his understanding).

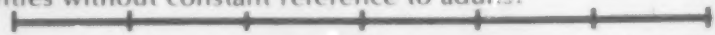
8. All children work within each of the traditional subject areas within a specified period of time.
(Please specify this time period here: .....)



9. Children have meaningful interactions with many kinds of older people in school (teachers; aides; administrators; parents; visitors; students from subsequent stages of education).

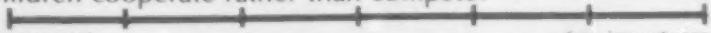


10. Children are expected to engage in their own learning activities without constant reference to adults.



11. Children talk freely to other children about their work.

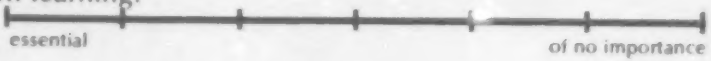
12. Children cooperate rather than compete.



13. Children behave responsibly.

*14. Children are deeply involved in what they are doing throughout the day.

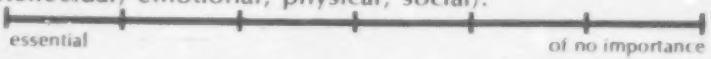
15. Each child feels that he is at the "command center" of his own learning.



C. Adult behaviors

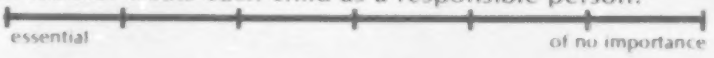
(Note: In every case, the term "teacher" should be understood as meaning any adult who is helping a child learn.)

1. The teacher is concerned with the child's whole development (intellectual; emotional; physical; social).

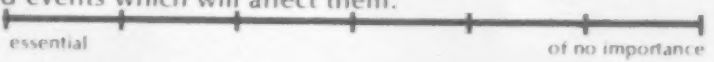


2. The teacher attempts to support and enhance each child's personal resources (accepts the child as he is and helps him grow).

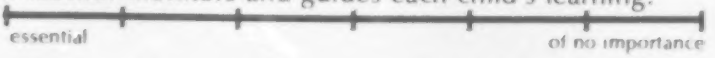
3. The teacher treats each child as a responsible person.



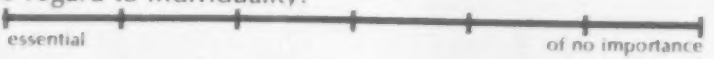
4. The teacher involves children in decision-making about acts and events which will affect them.



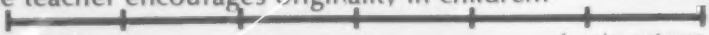
5. The teacher monitors and guides each child's learning.



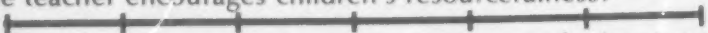
6. The teacher expects high quality outputs by children, with due regard to individuality.



7. The teacher encourages originality in children.

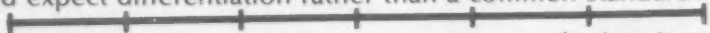


8. The teacher encourages children's resourcefulness.

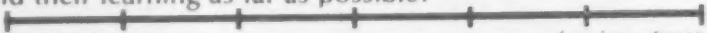


9. Individual differences among children are expected and encouraged.

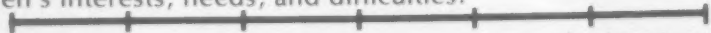
10. Teachers expect children's attainment to match their ability, and expect differentiation rather than a common standard.



11. The teacher actively encourages and assists children to extend their learning as far as possible.

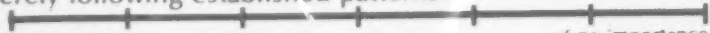


12. Most teaching results from the diagnosis of individual children's interests, needs, and difficulties.



13. Teachers ensure that children develop competence in basic communication skills, taking into account all the personal variables involved.

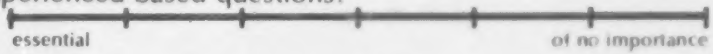
14. The teacher works in a creative, innovative way, rather than merely following established patterns.



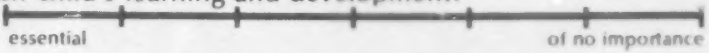
15. Teachers' personal interests and skills are used and built upon.

*16. Teachers promote a purposeful atmosphere by expecting and enabling children to use time productively, and to value their work and learning.

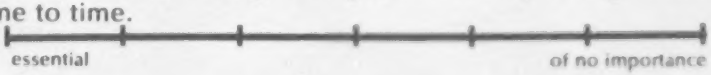
*17. The teacher obtains diagnostic information about a child's learning by close observation, and by asking immediate, experienced-based questions.



*18. The teacher keeps notes and writes individual histories about each child's learning and development.

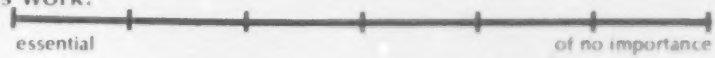


*19. The teacher lays down explicit guidelines within which the class operates, although the guidelines may change from time to time.

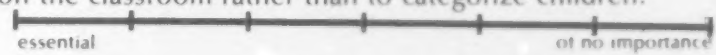


*20. The teacher is recognizably in charge of the class.

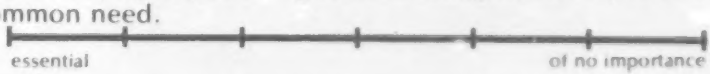
*21. Before suggesting any extension or redirection of a child's activity, the teacher pays diagnostic attention to the child and his work.



*22. The teacher uses evaluation to guide instruction and to provision the classroom rather than to categorize children.



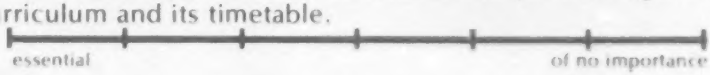
*23. Children are grouped for specific teaching when they have a common need.



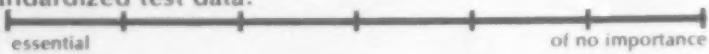
24. The teacher discusses with the child any work she has marked incorrect.

D. The system

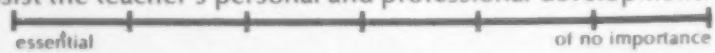
1. The system grants the teacher autonomy in developing what to teach and how to teach it, rather than prescribing the curriculum and its timetable.



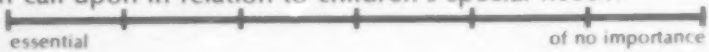
2. The system acknowledges that the teacher's personal evaluation of the child is at least as valid as judgements made from standardized test data.



3. The system provides a variety of supporting structures to assist the teacher's personal and professional development.



4. The system provides specialized services which the teacher can call upon in relation to children's special needs.

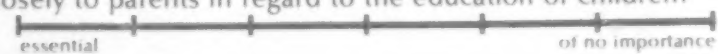


5. The system ensures that the teacher is placed in the position where she can be most effective, and allows for mobility when circumstances change.

6. The system enables teachers to participate in the ordering of classroom materials, and to order things other than the standard requisition items.

7. The system recognizes that open education requires a more favorable staffing ratio, and so makes more adults available in classrooms.

8. The system expects and enables teachers to relate more closely to parents in regard to the education of children.



Items marked * are adapted from the work of Judith T. Evans in relation to her study, "Characteristics of Open Education: Results from a Classroom Observation Rating Scale and a Teacher Questionnaire."

Although the statements which you have read are wide-ranging, there may be other qualities of open education about which you feel strongly. If so, please write these on the following page.

Thank you very much for your cooperation in completing this questionnaire, and for participating in the Open Education Study.

January, 1975 Leonard Sealey

SAMPLE OF TEACHERS COMPLETING THE QUESTIONNAIRE

Questionnaires were completed anonymously by self-selected samples of teachers and teaching aides from each of the six sites in the United States where open education was progressing. Ninety-eight questionnaires were completed, but twelve of these had to be discounted either because they were spoiled, or because no grade level was indicated. The numbers of acceptable questionnaires from the various sites are shown below:

Site	Number	Percentage of Total
A. Philadelphia	38	44.2%
B. Berkeley	4	4.6%
C. Hamden-New Haven	5	5.8%
D. Ferndale, Washington	16	18.6%
E. Waxahachie, Texas	19	22.1%
F. Greenwich, Connecticut	4	4.6%

The breakdown by grade level follows. Where grades are combined, it indicates that the classes contain children of different ages. It is significant that only five questionnaires were completed by teachers at levels above grade 3.

Grade level	Number	Percentage of total
K	22	25.6%
K-1	2	2.3%
K-3	2	2.3%
1	19	22.1%
1-2	2	2.3%
1-3	3	3.5%
2	15	17.4%
2-3	5	5.8%
2-4	3	3.5%
3	10	11.6%
4	2	2.3%
5	2	2.3%
5-6	1	1.2%

In addition to the questionnaires completed by American teachers, 38 teachers in Leicestershire, England volunteered to complete the document so that differences in viewpoints and practices might be determined. The Leicestershire teachers are in two main categories, those who teach "infants" and those who teach "juniors." Infants are children age 5-7, and so correspond with those in grades K and 1. Juniors are age 7-11, corresponding with children in grades 2 through 5. The breakdown by levels is shown below:

Class	Corresponding grade level	Number	Percentage of total
1st year infants	K	4	10.5%
1st/2nd year infants combined	K-1	7	18.4%
2nd year infants	1	6	15.8%
1st year juniors	2	3	7.9%
1st/2nd year juniors combined	2-3	3	7.9%
2nd year juniors	3	5	13.1%
2nd/3rd year juniors combined	3-4	2	5.3%
3rd year juniors	4	—	
3rd/4th year juniors combined	4-5	4	10.5%
4th year juniors	5	4	10.5%

RATING SYSTEM

No attempt was made to analyse the questionnaires by rigorous statistical procedures. Interpretation of the collective responses was based upon a simple count of the ratings as suggested by positions marked on the line segments. In order to do this, the line segment was considered as being further segmented into parts representing the following hierachical levels of significance:

None	— N	High	— H
Little	— L	Essential	— E
Moderate	— M		

Each response was so rated and counted. The most frequently preferred response (the mode) was then taken to be representative of the sub-sample for the purposes of constructing a table showing the modes relating to both thought and practice for every sub-group, both American and British. This table is attached.

The statements which follow are largely based upon an examination of the table of modes, although reference back to the original questionnaires, and to preparatory analysis sheets, was made whenever necessary.

TEACHERS' VIEWS OF THE ESSENTIAL CHARACTERISTICS OF OPEN EDUCATION

Fifty-five percent of the statements listed in the questionnaire were rated essential to the notion of open education throughout the elementary school level in both the United States and Leicestershire, England. The table shows the percentages of the statements rated essential in each section of the document:

Section	Number of items	Number rated essential	Percent.
A. The environment for learning	30	15	50%
B. Child behaviors	15	5	33%
C. Adult behaviors	24	17	71%
D. The system	8	5	63%

It will be noted that the greatest percentage relates to adult behaviors, and the least percentage to child behaviors. The characteristics rated as essential are as follows. The number which prefaces each statement is its number on the questionnaire.

A. The environment for learning

2. The classroom has many different resources to which a child may turn in relation to his own learning.
4. The whole school is considered as the learning environment, not just the classrooms.
5. Materials for learning relate to work in hand, and extensions of such work, rather than determine and limit what can take place.
6. There is an abundance of raw materials (paper, paint, wood, clay, scrap, etc.) through which children test out and express their ideas and feelings.
8. The classroom provides for verbal, aesthetic, mathematical, scientific, and social encounters and explorations.
9. There is space for quiet activities, noisy activities, and messy activities.
10. There is space and facilities for children to work alone, work in small groups, and work in a large group.
11. The classroom is organized in such a way that it enables children to be independent in their use of available resources.
14. Every child has a personal storage space, but the classroom and its facilities availabe are for use by all.

21. There are many and varied reference and reading books.
22. The emotional climate of the classroom is warm and accepting.
24. Children's activities, products and ideas are reflected abundantly in the classroom.
27. There is mutual respect for persons (actions; thoughts; ideas; beliefs).
28. The encounters among children and adults in every circumstance are honest.
29. The inputs by both teachers and children are high in relation to learning (both take a very active role).

B. Child behaviors

3. Children are encouraged to think in their own ways.
4. Children's understanding has an experiential base (understanding should arise from active interaction with reality).
7. A child's learning follows the cyclic pattern of PLAY (initial experimentation), STRUCTURE (directed experience to focus activity with specific learning in mind), and PRACTICE (experience through which the learner checks and deepens his understanding).
9. Children have meaningful interactions with many kinds of older people in school (teachers; aides; administrators; parents; visitors; students from subsequent stages of education).
13. Children behave responsibly.

C. Adult behaviors

1. The teacher is concerned with the child's whole development (intellectual; emotional; physical; social).
2. The teacher attempts to support and enhance each child's personal resources (accepts the child as he is and helps him grow.)
3. The teacher treats each child as a responsible person.
6. The teacher expects high quality outputs by children, with due regard to individuality.
7. The teacher encourages originality in children.

8. The teacher encourages children's resourcefulness.
9. Individual differences among children are expected and encouraged.
10. Teachers expect children's attainment to match their ability, and expect differentiation rather than a common standard.
11. The teacher actively encourages and assists children to extend their learning as far as possible.
12. Most teaching results from the diagnosis of individual children's interests, needs, and difficulties.
13. Teachers ensure that children develop competence in basic communication skills, taking into account all the personal variables involved.
14. The teacher works in a creative, innovative way, rather than merely following established patterns.
16. Teachers promote a purposeful atmosphere by expecting and enabling children to use time productively, and to value their work and learning.
17. The teacher obtains diagnostic information about a child's learning by close observation, and by asking immediate, experienced-based questions.
19. The teacher lays down explicit guidelines within which the class operates, although the guidelines may change from time to time.
22. The teacher uses evaluation to guide instruction and to provision the classroom rather than to categorize children.
24. The teacher discusses with the child any work she has marked incorrect.

D. The system

3. The system provides a variety of supporting structures to assist the teacher's personal and professional development.
4. The system provides specialized services which the teacher can call upon in relation to children's special needs.
5. The system ensures that the teacher is placed in the position where she can be most effective, and allows for mobility when circumstances change.
6. The system enables teachers to participate in the order-

ing of classroom materials, and to order things other than the standard requisition items.

7. The system recognizes that open education requires a more favorable staffing ratio, and so makes more adults available in classrooms.

The large measure of agreement between American and British teachers about the essential characteristics of open education must be set against differences in viewpoints.

There are only two additional characteristics which American teachers consider to be essential but some Leicestershire teachers do not. The characteristics are:

A. The environment for learning

26. The school communicates and interacts with the community in a variety of effective ways which relate to the education of the children.

B. Child behaviors

5. Children are free to follow and extend their own interests.

EVIDENCE OF OPEN EDUCATION

The extent to which teachers feel that they have been able to implement their thinking about open education may be assessed by considering the degree of correspondence between their ratings of the two variables.

The table gives the percentages of ratings which correspond at each of the grade levels, and in the Leicestershire schools:

	Percentage of ratings which correspond							
	K	1	2	3	K-4	4-6	UKI	UKII
Environment	83%	30%	43%	20%	47%	27%	60%	60%
Child behaviors	73%	20%	20%	40%	33%	27%	60%	47%
Adult behaviors	92%	42%	67%	25%	46%	29%	71%	88%
The system	100%	25%	38%	63%	38%	38%	38%	75%
All variables	86%	31%	45%	30%	43%	29%	61%	68%

The table shows that it is the kindergarten teachers who consider that their practice comes closest to their thinking. The correspondence then falls away sharply at 1st grade level, recovers a little at 2nd grade, and remains constantly low through to grade 6. This is not the case in the Leicestershire schools. At the infant level there is a high degree of correspondence which becomes slightly higher in the junior classes.

The degree of correspondence between thought and practice is generally highest in relation to adult behaviors. This is not surprising in that control of the variables is largely exercised by the self, but the low degree of correspondence at grade three will be noted.

The lowest degree of correspondence relates to child behaviors, except in the case of grade 3. The Child Behaviors section of the questionnaire appeared to be more contentious than any other.

DISCUSSION

Fifty-five percent of all the statements in the questionnaire are accepted as essential to the notion of open education by both the American and British teachers who responded, and none of them wished to add to the list. It would seem that the document may be considered as a check list of many essential qualities of the approach.

In view of the solidarity of the teachers' opinions, we must take very seriously other assessments of both thought and practice where there is general agreement at lower levels. There is no general agreement about any assessment below the moderate level in regard either to thought or practice, but the high level ratings given to almost all of the statements makes any moderate rating a comparatively low one.

Only two statements are given an almost unanimous rating at the moderate level for both thought and practice. The statements are:

B. 2 Children set their own levels of aspiration (decide how difficult to make their work).

B. 6 Children, rather than their teachers, decide on the point of closure in relation to their own learning (decide when an activity is "complete").

B. 2 is rated as essential by the teachers of the vertically-grouped classes, and by the teachers of grades 4, 5, and 6, but every other rating of this statement is at the moderate level. The assessments of B. 6 are even more uniform. The only deviation from that of moderate is the rating of high by the kindergarten teachers in regard to the significance of the idea.

These findings are very surprising. Of all the statements in the questionnaire, one would expect teachers to consider B. 2 and B. 6 to be at the very heart of an open approach. If "openness" does not encourage children to aspire to the highest levels they think they can attain, and permit them to remain engaged in a learning activity until *they* feel satisfied that a significant point has been reached, then we must question its validity. One might expect that this would be better understood by the Leicestershire teachers where open education has a longer history, but this is not so.

One of the outstanding characteristics of the responses to the questionnaire is the sharp differentiation of the kindergarten teachers from the other groups. Except in regard to adult behaviors, their assessments of practice are very different from those of their British counterparts, although their thinking is more congruent. A most dramatic finding is that there is complete correspondence between what kindergarten teachers expect of the system, and what they have been able to achieve. This degree of feeling comfortable with the system may be the "enabling" factor which makes it possible for them to achieve so much in their classrooms. The Leicestershire infant teachers' responses suggest that they are not so well placed,

even though the education authority in that County is thought to be very concerned about the issues. On the other hand, Leicestershire junior teachers would seem to fare much better. Traditionally, kindergarten has been seen in the United States as an intermediate step between home or nursery school and "real" school, and children of kindergarten age are still not required by law to attend. Kindergarten classes are not plagued by excessive testing or over-concern for development in the basic skills of reading, writing, and simple calculation. The teachers in the study were not unanimous in their assessment of the need for the principal to be the educational leader of the school, and they rated this at a moderate level in practice. Perhaps this is another indication of their separateness. Kindergarten classes have long been equipped with materials and apparatus which differs radically from that of first grade, and everything suggests that the teachers were better prepared to embrace many of the characteristics of open education and quickly put them into practice.

The issue of whether or not the principal should be the educational leader of the school has often been associated with the development of an open approach. In Leicestershire the general view of the education authority is that every principal should act in this way, and many American educators have suggested that this was one of the main reasons for the widespread development of the approach there. While most groups of teachers rate this characteristic as essential, the American teachers of vertically-grouped classes and the Leicestershire junior teachers assess it as of only moderate importance, and the rating of practice by both the Leicestershire infant and junior teachers is only at the moderate level. Yet practice is rated at the highest level by the American teachers of vertically-grouped classes. The fact that vertically-grouped classes exist may be a function of the exercise of educational leadership by the principals concerned. An educational leader normally creates options so that the needs of children may be met more closely, and vertical-grouping is one of them.

One final area which requires elaboration concerns those qualities which are unequivocally rated at the highest level in regard to both thought and practice by teachers in Leicestershire. These teachers do not seem to give such ratings lightly. Indeed, many of their ratings of practice are lower than might be expected. We will exclude statements about adult behaviors because almost all of them (71%) fit into the category. Our concern will be with characteristics of the environment, child behaviors, and the system. The set of statements is quite small:

A. 1 Children are non-graded.
A. 4 The whole school is considered as the learning environment, not just the classrooms.
A. 9 There is space for quiet activities, noisy activities and messy activities.
A.14 Every child has a personal storage space, but the classroom and its facilities available are for use by all.
A.15 Materials for learning are readily available to children.
A.20 Children are free to move about the classroom without asking the teacher's permission.
A.21 There are many and varied reference and reading books.
A.22 The emotional climate of the classroom is warm and accepting.
B.11 Children talk freely to other children about their work.
D. 2 The system acknowledges that the teacher's evaluation of the child is at least as valid as judgements made from standardized tests.

Despite the restricted nature of the set, the statements present a powerful picture, and encourage the search for a comparable set of statements which relate to the American classes. No such set exists, even if adult behaviors are included. Perhaps this is one measure of the maturity of experience with the open approach.

MODES RELATING TO THOUGHT AND PRACTICE BY GRADE LEVELS

KEY: N-NONE, L-LITTLE, M-MODERATE, H-HIGH, E-ESSENTIAL

Characteristic	K		1		2		3		Vert. (K-4)		4-6		UK I		UK II	
	X	√	X	√	X	√	X	√	X	√	X	√	X	√	X	√
A. ENVIRONMENT																
1. Non-graded	E M	N	M	M	M	M	M	M	Whole range	E M	M	M	E	E	E	E
2. Variety of resources	E	E H	E	M	E	M	E	M	E	M	E	M	E	E	E	M
3. Learning centers	E	E	E	M	E	M	E	M	E	E M	M	M	E H	M	E	M
4. Whole school	E	M	E	M	E	M	E	M	E	M	E	Whole range	E	E	E	E
5. Materials relate	E	M	E	M	E	M	E	M	E	M	E	M	E	E	E	M
6. Raw materials	E	E	E	M	E	M	E	M	E	M	E	M	E	E	E	H M
7. Structured materials	E	E	E	H	E	M	E	M	E	M	H	H M	E	M	F	M
8. Various encounters	E	E	E	M	E	M	E	M	E	E	E	H M	E	E	E	M
9. Various spaces	E	E	E	E M	E	M	E H	M	E	E M	E	H	E	E	E	E
10. Space for individuals & groups	E	E	E	E	E	E M	E	H M	E	H	E	M	E	E M	E	E

11. Individual use possible	E	E	E	M	E	H M	E H	M	E	M	E	E	E	M	E	M
12. Work displayed	E	E M	M	M	E	M	E H	M	E	H	E	E M	E	M	E	M
13. No sets texts	E L	M	Whole range	M	M	M N	E	M	Whole range	E L	M	M	M	M	M	M
14. Personal storage	E	E	E	M	E	E	E	E	E	E	E	M	E	E	E	E
15. Materials available	E	E	E	E	E	E	E	M	E	E	H	M	E	E	E	E
16. Diff. activities simultaneously	E	E	E	M	E	M	H	M	E	E	H	M	E	M	E	E
17. Own routines	E	E	E	H	E	M	M	M	H	M	H	M	E M	E	E	M
18. Individual work	E	E	E	M	E	E	H	M	E	M	H	M	E	M	E	E
19. Voluntary grouping	E	E	M	M	M	M	H M	M	H	M	Whole range	M	M	M	M	M
20. Free movement	E	E	E	M	E	M	H	M	E	E	E	E	E	E	E	E
21. Many books	E	E	E	M	E	M	E	M	E	E	E	M	E	E	E	E
22. Warm emotional climate	E	E	E	E	E	E	E	M	E	E	E	H	E	E	E	E
23. No subject organization	M	E M	M	M	M	M	M	M	M	M	M	N	H M	M	H	M
24. Classroom reflects children	E	E	E	M	E H	M	E	M	E	M	E	M	E	M	E	H
25. Work reflects community	E H	M	E	M	M	M	H M	M	E	M	E M	L	M	M	M	M
26. Relates communication	E	E	E M	M	E	M	E	M	E	M	E H	M N	H	M	E	M
27. Mutual respect	E	E	E	E	E	E	E	M	E	E	E	E M	E	M	E	E
28. Honest encounters	E	E	E	M	E	E	E	M	E	E	E	M	E	M	E	E
29. Active roles	E	E	E	M	E	M	E	M	E	E	E	H M	E	M	E	E
30. Principal leads	E M	M	E	M	E	E	E	M	M	E	E	N	E	M	M	M

Characteristic	K		1		2		3		Vert. (K-4)		4-6		UK I		UK II	
	X	√	X	√	X	√	X	√	X	√	X	√	X	√	X	√
B. CHILD BEHAVIORS																
1. Choice	E	E	E	M	E	M	E	M	E	M	H	M	M	M	H	M
2. Own levels aspiration	M	M	M	M	M	M	M	M	E	M	E	M	M	M	M	M
3. Think individually	E	E	E	M	E	M	E	M	E	E	E	H	E	H	E	E
4. Experiential base	E	E	E	M	E	M	E	M	E	Whole range	E H	M	E	H	E	H
5. Follow interests	E	E	E	M	E	M	E H	M	E	M	E	E M	M	M	E	M
6. Own point of closure	H	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
7. P-S-P cycle	E	E M	E	M	E H	M	E	M	E	M	E	M	E	H M	E	H
8. Traditional subjects	N	N	E	H M	M	M	M	M	M	M	E M	E M	L N	L N	E	E H
9. Various interactions	E	E	E	M	E	M	E	M	E	E	E	M	E	E M	E	M
10. Reference to adults	E	E H	E	M	E	M	H M	M	H	M	E	E H	E H	M	E	M
11. Talk freely	E	E	E	M	E	H	E	H M	E	E	H	M	E	E	E	E
12. Cooperate	E	E	E	M	E	M	H	M	E	M	H	M	E	H	E	E
13. Responsible	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M
14. Involved	E	M	E	M	E	M	H M	M	E	M	E H	M	E M	M	H	M
15. In command	E	M	M	M	E	M	H M	M	E H	M	E	M	M	M	M	M

C. ADULT BEHAVIORS																
1. Con. whole development	E	E	E	H M	E	E	E	M	E	E	E	E	E	E	E	E
2. Supportive	E	E	E	H	E	E	E	M	E	E	E	M	E	E	E	E
3. Treats child as responsible	E	E	E	H	E	E	E	E	E	E	E	H	E	E	E	E
4. Involves ch. in decisions	E	E	E	M	E	E M	H	M	E	H	E	E	E H	M	E	E
5. Monitors learning	E	E	E	E	E	E M	E	E	E	E	H	M	E	E	E	E
6. Expects quality	E	E	E	Whole range	E	E	E	M	E	H	E	E M	E	E H	E	E
7. Encourages originality	E	E	E	E	E	E	E	E M	E	E	E	M	E	E	E	E
8. Encourages resourcefulness	E	E	E	M	E	E	E	M	E	H	E	M	E	E	E	E
9. Encourages differences	E	E	E	E	E	E	E H	M	E	E	E	M	E	E	E	E
10. Expects different attainment	E	E	E	E	E	E	E	M	E	E H	E	E H	E	E	E	E
11. Extends learning	E	E	E	E	E	E H	E	E M	E	E	E	H M	E	E	E	E
12. Diagnoses	E	E	E	M	E	M	E H	M	E	H	E	M	E	Whole range	E	E M
13. Ensures competence	E	E	E	E	E	E	E	M	E	H	E	M	E	E	E	E
14. Creative	E	E	E	M	E	H	E	M	E	E M	E	M	E	H	E	M

Characteristic	K		1		2		3		Vert. (K-4)		4-6		UK I		UKII	
	X	√	X	√	X	√	X	√	X	√	X	√	X	√	X	√
C. ADULT BEHAVIORS (continued)																
15. Uses interests & skills	E	E	E	Whole range	E	M	H	M	E	M	E	M	E	E	E	E
16. Enc. purposeful atmosphere	E	E	E	E	E	E	E	M	E	H	E	M	E	H	E	E
17. Observations & questions	E	E	E H	H	E	M	E	M	E	H	E	M	E	H	E	E M
18. Records	E	E	E	M	E	M	H	M	E	M	M	M	E	E	E	E
19. Explicit guidelines	E	H	E	M	E	H	E	M	E	H	E	M	E	E	E	E
20. Is in charge	E	E	E	E	E	M	E M	M	E	E	L	M	E	E	E	E
21. Diagnostic suggestions	E	M	E	M	E	E	E	M	E	H M	M	M	E	M	E	Whole range
22. Evaluation guides	E	E	E	E	E	E	E	M	E	M	E H	M	E	M	E	M
23. Teaches groups	E	E	E	H	H	H	E	E M	E	H	E	E H	E	E	E	E
24. Incorrect marking discussions	E	E	E	H	E	M	E	E	E	E	E	H	E	E	E	E

D. THE SYSTEM																
1. Teacher autonomy	E	E	E	M	E	M	M	M	E	M	E	E	E	E M	F H	E M
2. Personal evaluation valid	E	E	E	M	E	E	E	H M	E	E	H M	M	E	E	E	E
3. Supports development	E	E	E	H	E	M	E	E	E	H	E	M	E	M	E	E
4. Provides services	E	E	E	E	E	M	E	E	E	H	E	H	E	M	E	E
5. Mobility	E	E	E	M	E	M	E	M	E	M	E	M	E	M	E	E
6. Ordering materials	E	E	E	E	E	E	E	E M	E	E	E	Whole range	E	M	E	E
7. More adults	E	E	E	M	E	E	E	E M	E	M	E	N	E	M	E	M
8. Expects close relationships between teachers and parents	E	E	E	M	E	H	E	M	E	E H	H	L	E	E	E	H

PRACTICUM

ROUGH SKETCHES OF
SOME CLASSROOM LAYOUTS
SAMPLE TIMETABLES
& OBSERVATIONS OF HOW
CHILDREN SPENT THEIR TIME

KINDERGARTEN

A whole-day program

8:30	Table and rug games
	Snack
9:40	Meeting
10:00	Free choice:
	Library
	Table games
	Rug games
	Science table
	Listening center
	Sandplay
	Cooking
	Housekeeping
	Art table (crafts)
	Painting
	Blocks
	Woodwork
10:45	Clean-up
11:00	Meeting
11:15	Lunch
11:45	Outdoor play or physical education
12:30	Rest
1:30	"Anything can happen":
	Music
	Reading readiness games
	Films
	Nature walks
	Group activities
2:00	Stories and songs
2:20	Prepare to go home
2:30	Dismissal

One hour in a Kindergarten classroom

Five adults are available to work with twenty-six children. Two are teachers, one is an aide, and the other two are parents who assist on a regular schedule.

12:50 3 girls work with clay with a parent.
1 girl paints.
1 boy glues pieces of wood together for his construction.
2 boys experiment with a balance beam with a teacher.
2 girls use the listening center.
2 girls and 1 boy draw in their writing books (preparatory to writing, or being helped to do so) with colored felt pens.
2 girls build with Poleidoblocs (math apparatus).
2 boys make sets of bottle tops and count them.
1 girl talks to a teacher about a caption for her painting.
1 boy and 1 girl each make patterns with Cuisenair Rods (math apparatus) on black paper.
1 girl dances and sings softly and another follows suit.
A teacher says, smiling, "Somebody put a nickel in you today, didn't they? . . . Do you know what that means? Come here and I'll tell you!"

1:20 1 girl copies what a teacher has written for her in her writing book and says, "Here, I'm ready to read it!"
1 boy who has been painting on one half of a piece of paper folds it over to form a symmetrical "blot" pattern.
A teacher moves in to work with one girl intensely using Cuisenaire Rods.

1:23 A girl decorates the cover of her new writing book, expertly drawing an abstract design with felt markers.

1:32 A teacher moves around the class asking leading questions which:
a. Make things explicit to children
b. Extend children's learning
1 girl places a record on the turntable with infinite care.

1:33 Girl completes her cover design, holds it up and says, "Look what I did!" She then opens her book and draws, with surprising sureness, another abstract design on the first page.

1:36 A teacher moves to a group working with a large bucket balance and engages them in discussion.

1:45 The aide works with 1 boy and 1 girl who are making patterns with Cuisenaire Rods.
1 girl sits quietly reading through other children's writing books.

1:50 A teacher works with 1 girl using cut-out letters to build up words.

1:55 Clear-up begins. One teacher takes a large group of children to the rug area and they sing three short songs.
Children going on a trip the next day have the relevant papers pinned to their outer clothing as they leave. As each child is dismissed, the teacher asks, "What was special about today? . . . Something that was really important to you . . . I want you to make a decision."

FIRST GRADE

Timetable

8:50 Meeting

* 8:45 Children pick up work folders which have been prepared in advance for them (mainly ditto sheets). The children are in 4 main groups, but individual needs are taken into account.
When assigned work has been completed, children are free to:
Paint
Do craft work at the art table
Sew
Read in the library corner
Listen to taped stories
Read in the "read-aloud" center
Play with the "little world" (a collection of small representational figures and objects)
Build with blocks

Play games with dominoes
Play games or make puzzles in the "loft"
Make books in which to write
Play "learning games"
Use the play house

9:35 Physical education
10:20 Continue work as at 8:45
11:00 Clean-up
11:10 Lunch

*The teacher listens to reading in groups from 9:05 until 11:00

11:45 Choice time
(Children are free to choose to work in any area in the room.)
12:00 Gather together for films, stories or songs
12:30 Mathematics (in groups)
1:30 Clean-up
1:40 Science or Social Studies
2:00 Prepare to go home
2:10 Dismissal

An afternoon in a first grade classroom

Two adults, the teacher and her aide, are available to work with thirty-one children.

1:10 7 girls make drawings in their writing books preparatory to asking the teacher to write to their dictation.
1 girl asks me to write the names of the colors in the pattern she has drawn. I do so, and she copies the words. 3 more boys and 2 more girls begin to draw similarly.
1 girl writes "fish" in her work book on the page headed "F f" and draws a corresponding picture.
2 girls examine mealworms, watching how they move.
1 girl has a private discussion with her teacher.
2 boys lie on the floor and copy the names of the various activities printed on the "sign-up board".
1 boy plays a self-corrective picture and word matching game.

3 boys play a word concentration game which has been made by the teacher.
The aide begins work with selected children in small groups, playing a wide variety of reading and pre-reading games. (This continues until 2:00.)
The teacher works with individuals, checking their ability to read words and providing them with new words of their own choice which she writes individually on file cards. (This continues throughout the period.)

1:45 1 girl lies on the rug reading. Another girl joins her. (Until this point, nobody has chosen to read a book.)

2:01 Teacher asks the children to look at the clock. Says, "When the big hand is on the 5 we are going to clean-up, so you have about 4 more minutes!"

2:05 Clean-up, followed by all the children coming to the rug area. (Children very supportive of and gentle towards each other.)

2:15 Teacher reads a story, followed by many good questions by the children. Notion of staying alone arises. Teacher promises to talk about it at the next meeting time.

2:27 Teacher outlines mathematical activities available and specifies with whom she wants to work. Mathematical activity begins.

2:30 2 girls make calendars.
1 boy and 1 girl work with Pattern Blocks.
2 girls use mathematical workbooks.
1 boy and 1 girl build with large dominoes.
6 children are tested by the teacher as required by the local School District.
1 boy "posts" pieces in a posting box.
2 boys and 1 girl build with Geo-blocks.
4 girls and 1 boy put wooden puzzles together.
4 boys build with large "bricks".
1 girl uses the Logic Blocks.
2 boys build with plastic shapes.
2 girls work on the chalkboard:
1 draws sets and writes the corresponding number.
1 writes number sequences.

2:40 Aide begins work with children using the Geo-blocks, and imposes structure on the experience. She then helps a girl to begin her book about shapes.
2:53 Clean-up begins.
2:55 Children congregate in the rug area, the teacher gives out homework books, and the children get their coats and depart.

SECOND GRADE

Timetable

9:15 Meeting
9:30 First task: Write a journal entry
Second task: Begin and complete work assigned by the teacher in the form of dittos available in "work to do" boxes. When complete, deposit work in the "paper box" and check daily record form (collected by the teacher at the end of each day).
Third task: Sign-up for choice work:

a. Activity center
b. Work on the chalkboard
c. Library
d. Listening center
e. Science
f. Table time (individual choice of "seat-work")
g. Story board (use of flannel board)
h. Art center
i. Listening to record player using headphones
j. Cooking (available for one week each month)
k. Using the music-making instruments
l. Puzzles

11:10 Clear-up
11:15 Reading
11:30 Recess
12:00 Lunch
12:30 Story
12:45 Writing
1:00 Continue work as 9:30
2:00 Clear-up
2:15 Dismissal

A morning in a second grade classroom

Two adults, the teacher and her aide, are available to work with sixteen children.

9:05 Most children have finished their breakfast snack and some have started individual work.
Teacher gathers them together, and they practice songs which they will sing at the assembly two days later.
It is "Dress-up Day" and children are in their smartest clothes. Teacher asks, "How does it feel to be dressed-up?" and they discuss it.
Teacher reads part of story (Grimm's "Golden Goose"). Discussion which follows requires children to make predictions and to consider cause and effect. It also enlarges vocabulary.

9:35 Reading begins.
Teacher works with one group, the aide with another, and two other groups have worksheets. Teacher teaches word attack skills. Aide hears children read aloud and reviews contractions.

9:55 Teacher instructs her group to work on two specific pages in their workbooks, but stays with them.
3 boys who had been working independently complete their worksheets and move to a table to play a word game.

10:00 2 girls complete their worksheets and begin craft activity (stick weaving, and gum and glitter pictures).
1 boy working with teacher completes his workbook pages and turns to his stitchery picture.

10:10 Recess time. Teacher asks, "Is anybody going out for recess?" Most prefer to work on their choice of activity:
3 boys build with colored cubes.
2 girls continue with their workbooks.
3 girls weave "God's eyes".
2 girls play a sound game.
3 girls help the teacher prepare craft materials.
1 boy reads a book.
2 children go out to recess.

10:25 Clean-up begins in preparation for the science resource teacher who then takes over the class at 10:30. This continues until lunch at 11:15. (On other days, this period is spent on art, social studies, library work, and choice time.)

An afternoon in another second grade classroom

12:30 Children return. Specified work for the afternoon is shown on the chalkboard. It states that the period 12:30 to 1:00 should be spent by all reading library books and drawing and writing in the picture and story books. The mathematical work for three groups is specified in terms of pages in computational workbooks.

1:00 2 girls read in the library area.
1 girl tells me about a pattern made by a boy and then writes freely about it.
3 boys use a small mechanical calculator and counting discs to compute.
1 boy cuts out geometric shapes.
The teacher works with 6 children who have workbooks or worksheets concerning basic computational facts (=, −, x, ÷). Pegs and pegboards are available and are used to represent multiplications. Remaining children work in language arts workbooks.

1:35 Girl who is working on division problems such as $8\overline{)64}$ asks me if I can divide decimals. She writes an example:

$$10\overline{)4.000}\quad 0.4$$

She says, "These are *decimals*! I learned last night. Nobody in the class knows about them except me. My mom taught me!"

1:49 Everybody, except one boy who is completing a dot picture, is working on math.

2:00 The aide leaves.
Clear-up begins.

2:10 Children prepare to depart for physical education which completes the afternoon activity for the day. (At this time on other days there is music, art, and craft activities, and work with volunteer parents.)

THIRD GRADE

Timetable

8:45 Preparing the classroom

9:00 Meeting
Individuals choose activities for the day from the options available

9:15 Mathematics, in groups

10:00 Breakfast snack

10:05 Reading, in groups

10:45 Recess

11:00 Quiet time, listening to music

11:15 Reading and activities chosen earlier

12:00 Lunch

1:00 Complete assigned work and copy homework

1:30 Art (Monday)
Music (Tuesday)
Physical education (Wednesday)
Science (Thursday)
Social Studies (Friday)

2:15 Activities

3:00 Dismissal

An afternoon in a third grade classroom

A teacher, her aide, and a student teacher are available to work with about twenty-five children. In addition, an adviser is visiting.

1:10 Children return from lunch and recess.
Homework is written on the chalkboard:
"Write three facts that you know about guinea pigs."
All children copy homework into their homework books immediately and then begin various activities.
Teacher moves around the room talking with individuals about various matters, then helps 2 girls with their language arts workbooks.

1:17 2 boys, 1 girl and the aide play checkers.
1 girl and the student teacher play chess.
7 children sit in a circle with the adviser discussing animals in general and the guinea pig in particular. They discuss feeding and general management.
2 girls make a weather bulletin board.
1 girl is drawing on cards with magic markers.
2 girls play "Orbit the Earth" addition game.
1 boy works on his poster for the school poster competition.
2 girls make "As noisy as _____" book.

1:25 1 boy still copying homework. Teacher talks with him about what to do next. He says that he wants to begin an independent project, but teacher reminds him that he still has to complete his "Wind Book" so he gets it.

1:30 Bell rings. All children gather together and teacher checks that everybody has signed up for an activity and discusses the options briefly.

1:33 3 children work with student teacher making collages.
Adviser leaves with 6 children on "rock walk" (to collect rocks of different kinds in school environment).
Boy works to finish his Wind Book, supported by the teacher from time to time.
2 girls work with clay, referring to an illustrated book for the procedure. They begin coil pots.
3 children feed the guinea pig, touch it, and discuss possible names.

1:45 Boy completes his Wind Book. Shows and reads it to the teacher. He talks to her about what he intends to make with a box he has brought to school.

1:45 Children return from rock walk.
They each wash the rocks they have collected and start to sort them on a tray.

2:00 Teacher leaves the macramé group to work on their own and interacts with clay group.
Boy begins to make Chinese dragon mask from his box.
Aide works with 1 girl arranging the bulletin board.

2:05 Teacher discusses mask with the boy who is making it. He informs her, "I am going to cut strips of this black paper to cover this box. Then I'm going to make eyes. These three (holds up magic markers) are Chinese colors . . . green eyes . . . pink nose . . . yellow for the mouth."
Another boy approaches and wants to use some of his paper. Boy says, "I ain't going to waste no scraps on this dragon! I'm going to use everything."

2:10 Teacher sounds gong. Asks children to clean-up and go directly to their math groups.

2:15 Teacher gathers 12 children together and discusses how to make up mathematical word problems. Children then do so and check individually with the teacher before playing mathematical games. Some prefer to work in workbooks and teacher suggests suitable pages for individuals.
Aide works with 3 children learning number facts.
Student teacher works with 7 children, using worksheets.
Boy who was making mask sits alone with his math book.

2:35 Children begin to record their work of the day on their record sheet. Each activity is assessed by drawing one of the three symbols:

Comments are also written.
All children who had been working with the teacher have completed their assignments and are playing two math games.

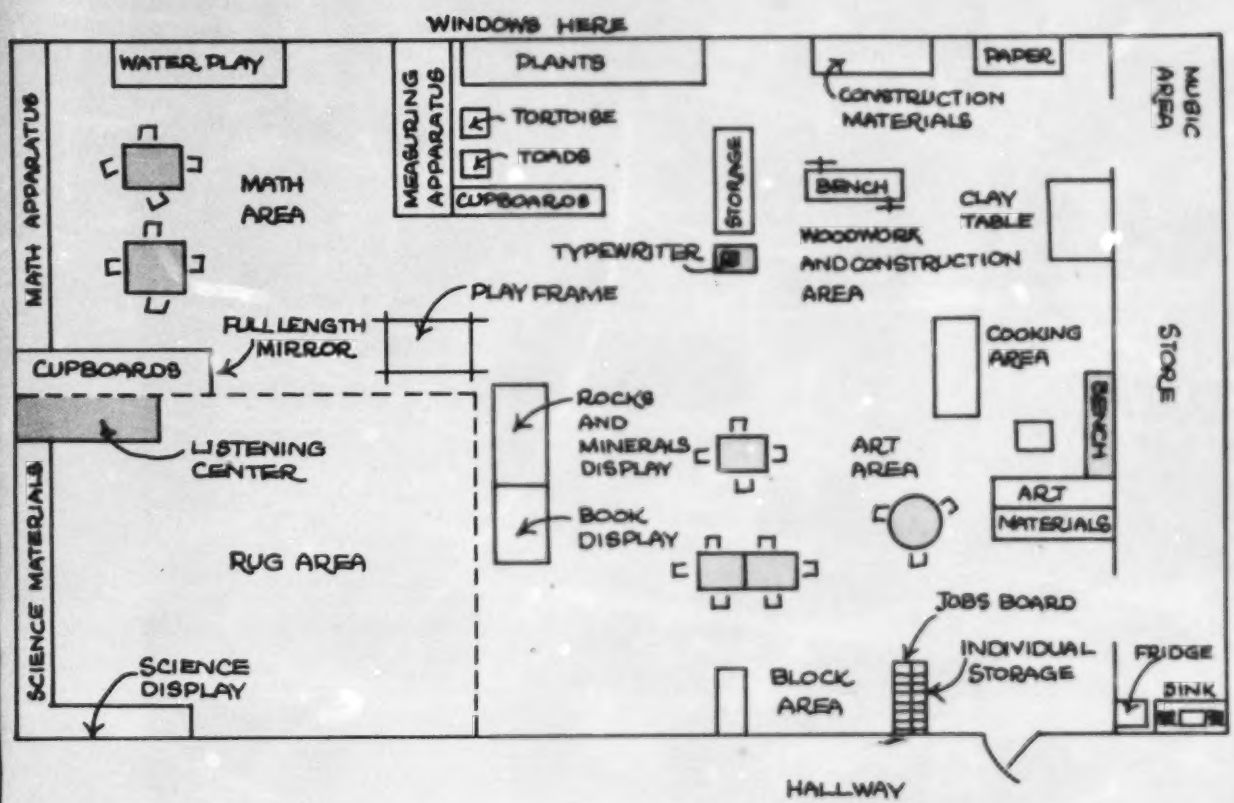
2:45 All record sheets completed.
Teacher holds a brief meeting and children depart.

SECOND, THIRD, AND FOURTH GRADE VERTICALLY GROUPED

Timetable

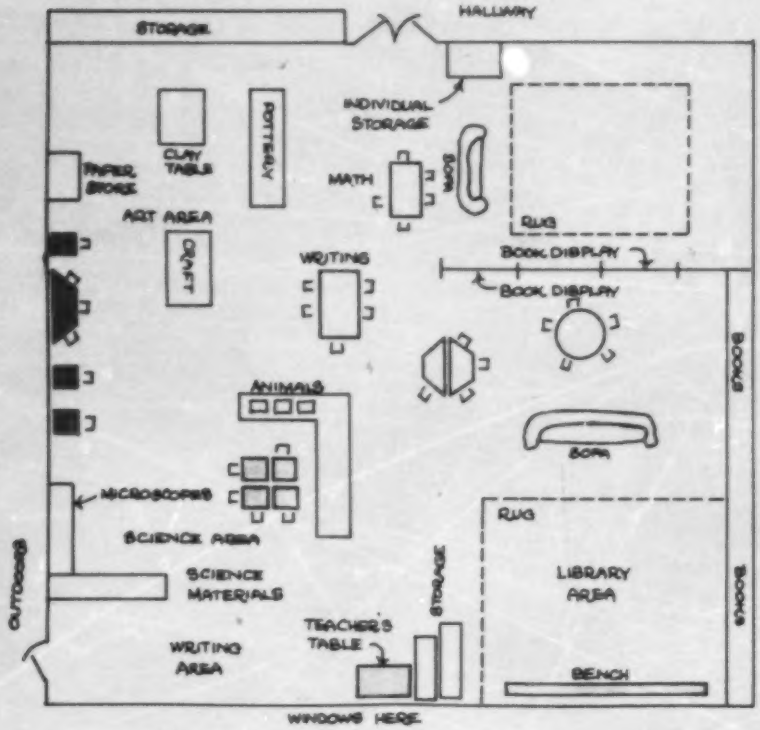
* 8:45	Meeting: sharing new ideas discussing things accomplished decision-making talking about issues and events
9:30	Mathematics in groups
10:15	Assembly
10:30	Various class activities (e.g. music, physical education)
11:20	Lunch and recess
12:30	Children mainly follow their own interests, but are also assigned work according to their needs and follow-up a shared experience such as a field trip. If the class has a study theme, work related to it also takes place at this time. Much creative and other writing forms take place, but there is a great variety of modes of expression. Two half-hour periods are spent weekly on formal handwriting skills.
2:45	Clear-up
3:00	Story
3:30	Dismissal

*Once weekly, the period 8:45 to 10:15 is devoted to art and crafts when new processes and techniques are introduced to the class as a whole.

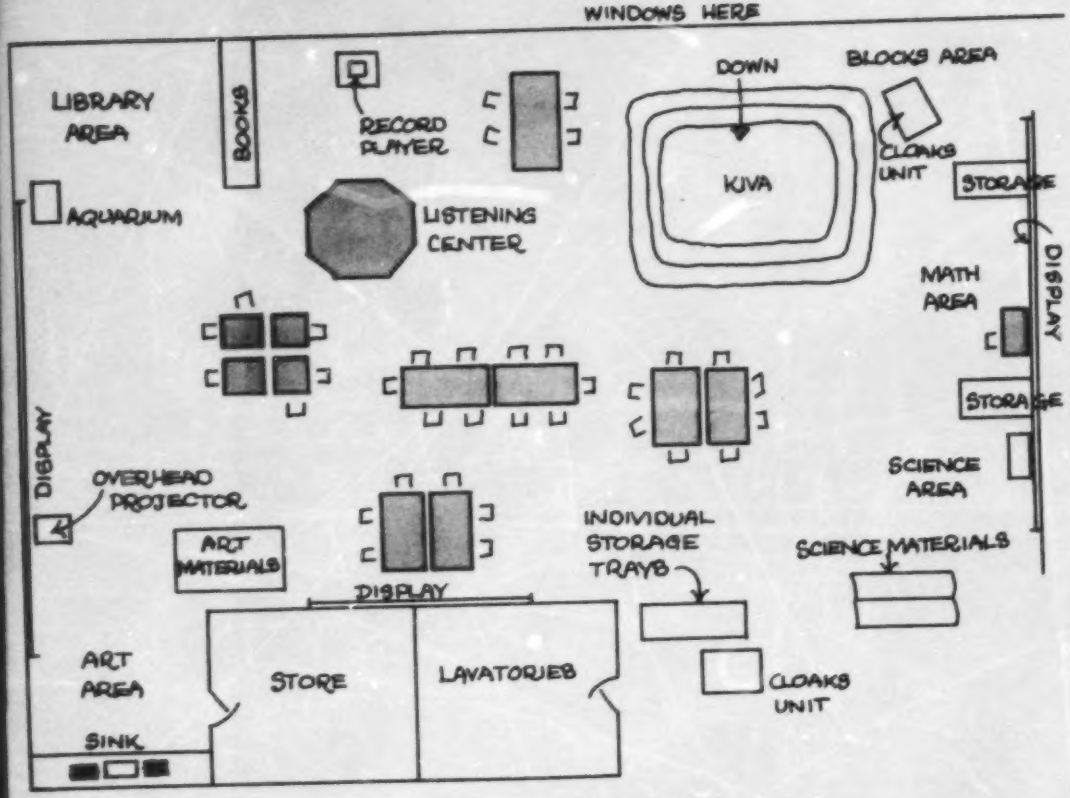


KINDERGARTEN CLASSROOM

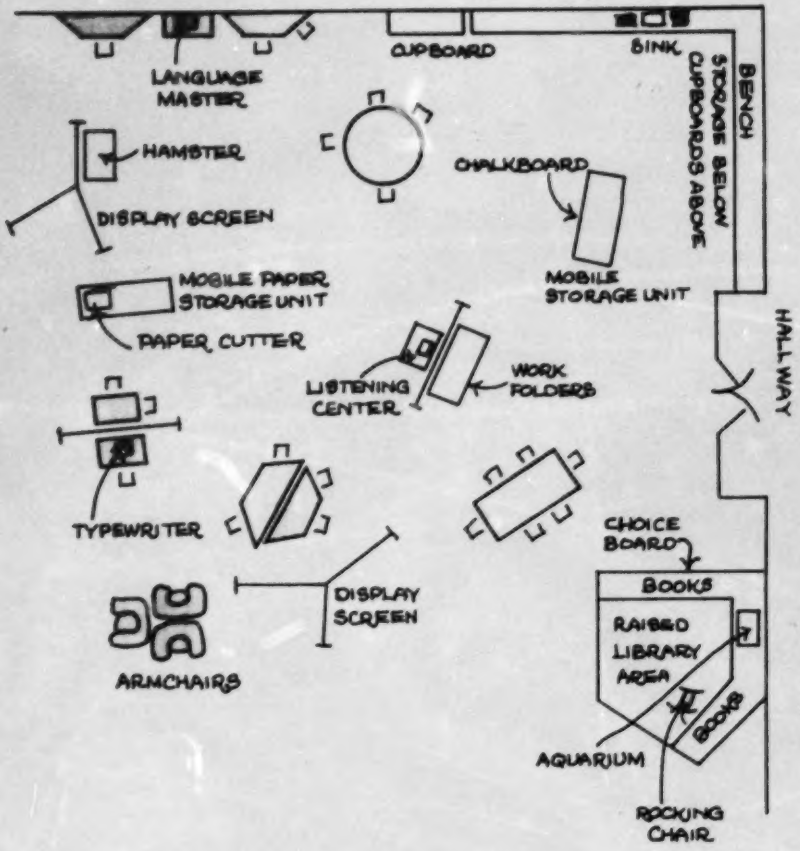
CLASSROOM FOR COMBINED FIFTH AND SIXTH GRADES



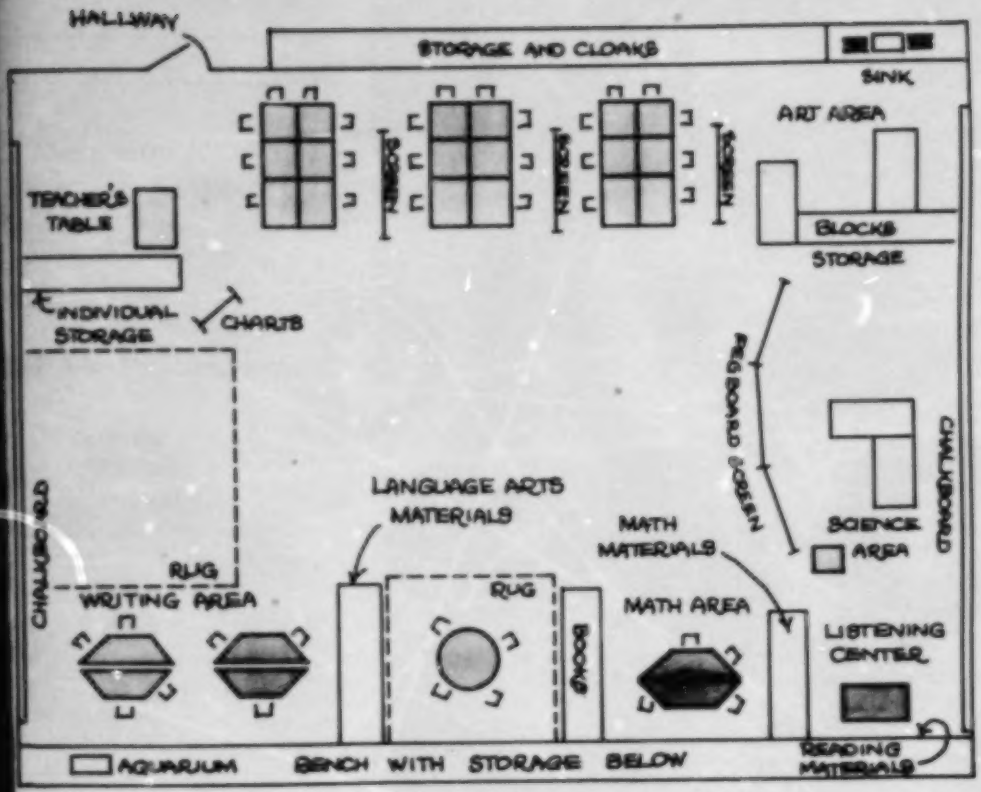
CLASSROOM FOR COMBINED SECOND AND THIRD GRADES



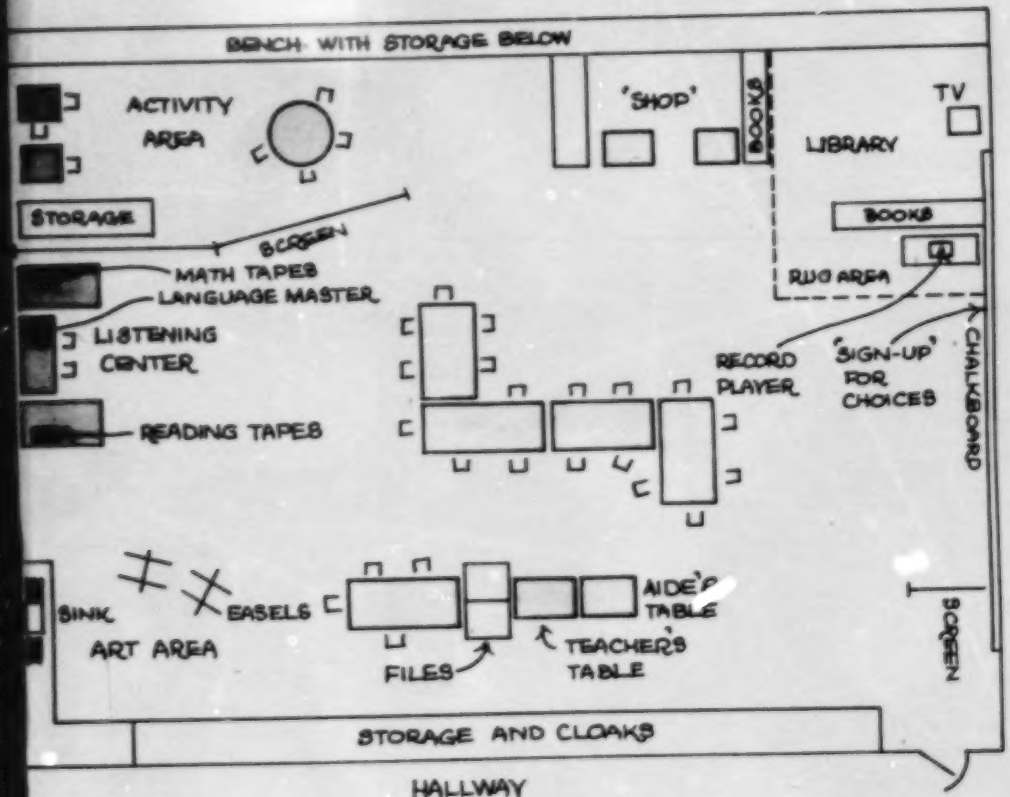
VERTICALLY GROUPED CLASSROOMS: (FIRST, SECOND, AND THIRD GRADES)



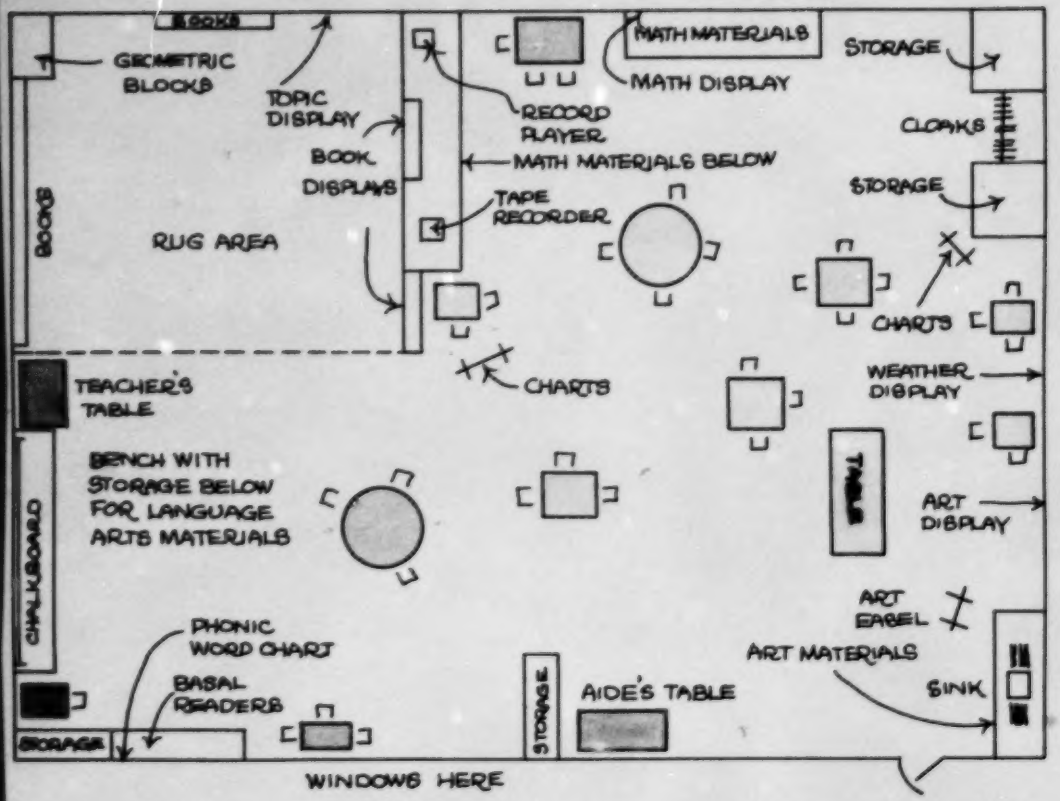
THIRD GRADE CLASSROOM



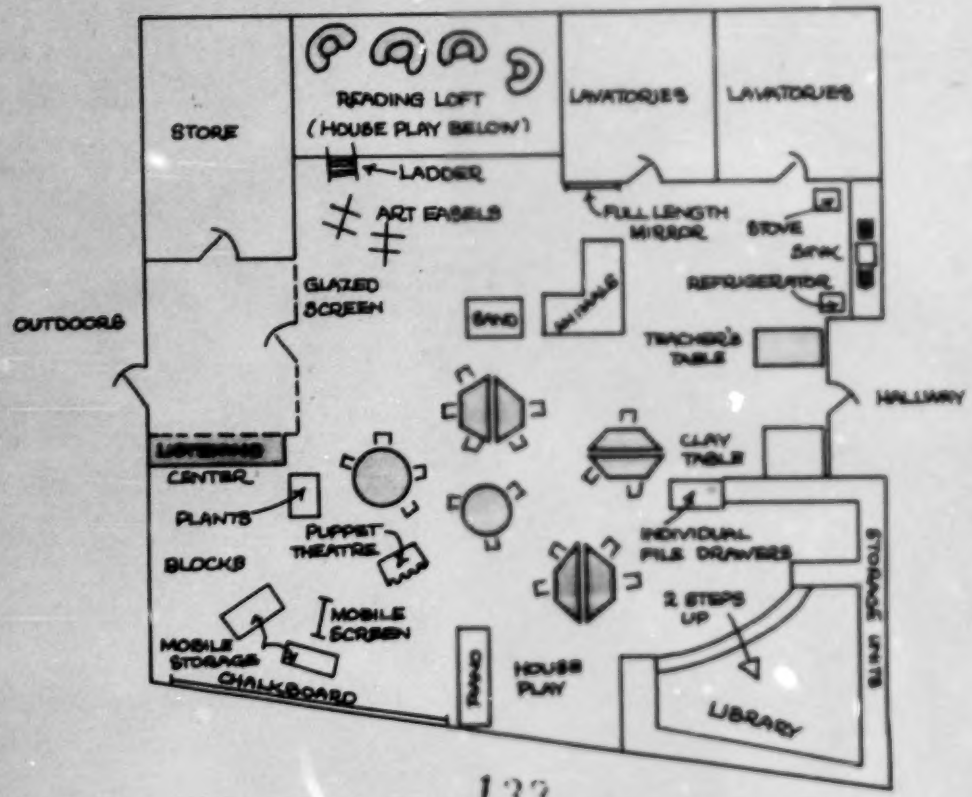
SECOND GRADE CLASSROOM



FIRST GRADE CLASSROOM



KINDERGARTEN CLASSROOM



LEONARD SEALEY was born in London, England, and educated at Loughborough College of Advanced Technology, Peterborough College of Education, and the University of Leicester. He began teaching in primary schools in 1948 and became a principal in 1954. During those six years he worked to change traditional methods of educating young children. In 1956 he was appointed advisor to all primary schools in Leicestershire. For nine years in that post he developed a more open approach to elementary education. In 1965 he was appointed principal of North Buckinghamshire College of Education (now the Milton Keynes College of Education affiliated with Oxford University) where he established an innovative program of teacher training.

Mr. Sealey came to the United States in 1967 to be director of the Regional Educational Laboratory Program of the Educational Development Center, Newton, Massachusetts. There he was able to include the open education approach in the design of the national project Follow Through.

Leonard Sealey has published a number of texts and books for teachers working in open education programs and schools. Since 1968 he has been a free lance writer and consultant. Among his consultancies are: The Office of Education, Washington, D.C.; the Department of Education, Puerto Rico; The British Council, London; The Ford Foundation, New York; The Educational Development Center, Newton, Massachusetts; The Rank Organization, London; The Madison Project, Syracuse University; and The Learning Research and Development Center, University of Pittsburgh.

A painter as well as an educator, he was elected a Fellow of the Royal Society of Arts in 1974.